Received by OCD: 10/8/2019 12:50:34 PM

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Enterprise Field Services, LLC	OGRID: 151618
Contact Name: Thomas Long	Contact Telephone: 505-599-2286
Contact email:tjlong@eprod.com	Incident # (assigned by OCD): NCS1910928416
Contact mailing address: 614 Reilly Ave, Farmington, NN 87401	Λ

Location of Release Source

Latitude 36.713375

Longitude -108.105496

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Latera	l #3A-2 Pipeline	Site Type Natural Gas Gathering Pipeline	
Date Release Disc	overed: 3/25/2019	Serial Number (if applicable): NM 0 024892	

Unit Letter	Section	Township	Range	County
F	21	29N	12W	San Juan

Surface Owner: State Federal Tribal Private (Name: BLM

Nature and Volume of Release

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

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls):	Volume Recovered (bbls):
🗋 Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
Other (describe)	Volume/Weight Released (provide units): Estimated 80 BBLs of Hydro-Static Test Water (Potable Water)	Volume/Weight Recovered (provide units)
Cause of Delegas At any	arovimately 400 p.m. on March 05, 2010 a meture and	and devices builds shall be the first of the state of the

Cause of Release: At approximately 4:00 p.m. on March 25, 2019, a rupture occurred during hydro-static testing of the Lateral 3A-2 pipeline. Approximately 80 barrels of potable water was released to the ground surface and flowed south along an ephemeral wash (blue line on a USGS topo map) approximately 200 feet. The released fluids were contained as much as practicable. Remediation activities were completed on April 25, 2019. The final excavation dimensions measured approximately 85 feet long by 28 feet wide by approximately 15 feet deep. Approximately 136 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

Form C-141 Page 2

State of New Mexico **Oil Conservation Division**

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

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

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

Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jon E. Fields Signature:	Title: Director, Environmental Date: $\frac{10/2}{9}$	
email: jefields@eprod.com	Telephone: (713) 381-6684	
OCD Only		
Received by: OCD	Date: 10/8/16	
Closure approval by the OCD does not relieve the responsible pa remediate contamination that poses a threat to groundwater, surfa party of compliance with any other federal, state, or local laws an	rty of liability should their operations have failed to adequately investigate and ce water, human health, or the environment nor does not relieve the responsible nd/or regulations.	
Closure Approved by:	Date: 12/10/19	
Printed Name: Cory	Title: Environmental Specalist	

Title: Environmental Specalist



CLOSURE REPORT

Property:

Lateral 3A-2 Hydro-Test Release NW ¼, S21 T29N R12W San Juan County, New Mexico

August 9, 2019 Ensolum Project No. 05A1226052

Prepared for:

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

Prepared by:

Ranee Deechilly Environmental Scientist

n

Chad D'Aponti Field Environmental Scientist

umm

Kyle Summers, CPG Sr. Project Manager

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	INTRODUCTION

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CLOSURE REPORT

Lateral 3A-2 Hydro-Test Release NW ¼, S21 T29N R12W San Juan County, New Mexico

Ensolum Project No. 05A1226052

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Lateral 3A-2 Hydro-Test Release (Site)
Location:	36.713368° North, 108.105419° West Northwest (NW) ¼ of Section 21, Township 29 North, Range 12 West San Juan County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

During March 2019, Enterprise performed hydrostatic pressure testing on the Lateral 3A-2 pipeline to evaluate the integrity of the pipeline. During the pressure test, a leak was identified. The resulting release was characterized by discoloration on the ground surface and a flow path that traveled south from the point of release. Enterprise subsequently initiated activities to facilitate the repair of the pipeline and to remediate potential petroleum hydrocarbon impact resulting from the release.

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

1.2 **Project Objective**

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

2.0 CLOSURE CRITERIA

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

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



- Two (2) cathodic-protection wells were identified within a mile of the Site. Cathodic-protection well Gallegos Unit 152 E (Unit O, Sex 21 T29N R12W), located approximately 0.5 miles from the Site and at a lower elevation, indicates a depth to water of approximately 80 feet below grade surface (bgs). Cathodic-protection well Moncrief Fed 1E (Unit D, Sec 22 T29N R12W), located approximately 0.8 miles from the Site and at a lower elevation, indicates a depth to water of 180 feet bgs.
- The Site is located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or significant watercourse.
- The Site is not located within 200 feet of a lakebed, sinkhole or playa lake.
- The Site is not located within 300 feet of a permanent residence, school, hospital, institution or church.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were identified within 1,000 feet of the Site.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3.
- The Site is not located within 300 feet of a wetland.
- Based on information identified on the New Mexico Mining and Minerals Division's GIS, Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- The Site is not located within an unstable area.
- The Site is 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 Petroleum Hydrocarbon Impacted Soils			
Constituent	Method	Limit	
Chloride	EPA 300.0 or SM4500 CI B	600 mg/kg	
TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg	
BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg	
Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg	



3.0 SOIL REMEDIATION ACTIVITIES

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

The final primary excavation measured approximately 85 feet long and 28 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 15 feet bgs. The final flow path excavation measured approximately 163.5 feet long and four (4) feet wide, with a maximum depth of approximately three (3) feet bgs.

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

A total of approximately 136 cubic yards (yd³) of petroleum hydrocarbon affected soils were transported to the Industrial Ecosystems, Inc. (IEI) landfarm on Crouch Mesa near Aztec, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix B**. The excavation was backfilled with a combination of imported fill and the segregated, laboratory-confirmed, unaffected stockpiled soils, and was then contoured to surrounding grade.

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

4.0 SOIL SAMPLING PROGRAM

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

Ensolum's soil sampling program included the collection of 21 composite soil samples (CS-1 through CS-21, and FP-1 through FP-10), comprised of five (5) aliquots each, from the primary excavation and flow path for laboratory analyses. In addition, four (4) composite stockpiled soil samples (SP-1 through SP-4), consisting of five (5) aliquots each, were collected from the soils that were segregated for potential reuse to confirm the material was suitable to remain on-Site. A clean shovel was utilized to obtain fresh aliquots from each accessible area of the excavation. An excavator, operated by Sunland, was utilized to obtain fresh aliquots from areas of the excavation that exceeded depths greater than six (6) feet bgs. The New Mexico EMNRD OCD provided verbal approval to proceed with the sampling events, although a New Mexico EMNRD OCD representative was not on-Site during the sampling events. A BLM representative was on-Site during the April 23, 2019 sampling event.

First Sampling Event

During the first sampling event, three (3) composite soil samples FP-1 (0'-0.25'), FP-2 (0'-0.25'), and FP-3 (0'-0.25') were collected from the flow path to evaluate the level of petroleum hydrocarbon impact in that area prior to excavation. Analytical results from each of these samples indicated New Mexico EMNRD OCD closure standard exceedances. Soils associated with composite soil samples FP-1, FP-2, and FP-3 were subsequently removed and transported to disposal during excavation activities.

The initial pipeline repair excavation was sampled during the first sampling event to evaluate petroleum hydrocarbon impact. Composite soil samples CS-1 (5'), CS-2 (5'), CS-3 (5'), and CS-4 (5') were collected

Enterprise Field Services, LLC Closure Report Lateral 3A-2 Hydro-Test Release August 9, 2019



from the floor of the excavation. Composite soil samples CS-5 (0'-15'), CS-6 (0'-15'), CS-7 (0'-15'), CS-8 (0'-15'), CS-9 (0'-15'), CS-10 (0'-15'), CS-11 (0'-15'), and CS-12 (0'-15') were collected from the sidewalls of the initial repair excavation. Analytical results from composite soil samples CS-2, CS-3, and CS-9 from the initial repair excavation indicated New Mexico EMNRD OCD closure standard exceedances. In response to the data exceedances, the excavation was extended to remove petroleum hydrocarbon impact. Soils associated with composite soil samples CS-2, CS-3, CS-9, and CS-10 were removed by excavation and transported to the landfarm for disposal/remediation.

Second Sampling Event

After the excavation was deepened and extended to the north and south, a second sampling event was performed. Composite soil samples CS-13 (15'), CS-14 (15'), CS-15 (15'), and CS-21 (6') were collected from the floor of the extended excavation to replace composite soil samples CS-2 and CS-3 which had exhibited closure standard exceedances and were removed by excavation. Composite soil samples CS-16 (3'-15'), CS-17 (3'-15'), CS-18 (3'-15'), and CS-19 (3'-15') were collected from sidewalls in areas that had been extended to accommodate the deeper excavation, but already exhibited acceptable analytical results. Composite soil sample CS-20 (0'-5') was collected from the extended sidewall to replace previous sidewall composite soil sample CS-9 which had exhibited a closure standard exceedance and was removed by excavation.

Third Sampling Event

To address the petroleum hydrocarbon impact identified within soils along the surface flow path of the release, the entire flow path was excavated to a total depth ranging from 1.5 feet to three (3) feet bgs at which point field analyses indicated that the impact had been removed. Composite soil samples FP-4 through FP-10 were collected along the length of the flow path by combining aliquots from the floor and sidewalls of the resulting excavation.

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

Soil associated with composite soil samples CS-2, CS-3, CS-6, CS-9, CS-10, and FP-1 through FP-3 were removed from the Site during additional excavation activities and were subsequently transported to the IEI landfarm for disposal/remediation.

5.0 SOIL LABORATORY ANALYTICAL METHODS

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

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

6.0 DATA EVALUATION

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) associated with the composite soil samples (CS-1, CS-4, CS-5, CS-7, CS-8, CS-11 through CS-21, FP-4 through FP-10, and SP-1 through SP-4) to the applicable New Mexico EMNRD OCD closure criteria. Soil associated with composite soil samples CS-2, CS-3, CS-6, CS-9, CS-10, and



FP-1 through FP-3 were removed from the Site by excavation and transported to the 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 in place indicate benzene is not present in concentrations greater than the laboratory PQLs, which are less than the 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 in place indicate total BTEX is not present in concentrations greater than the laboratory PQLs, which are less than the New Mexico EMNRD OCD closure criteria of 50 mg/kg.
- The laboratory analytical results for composite soil samples CS-13, FP-6, and SP-3 collected from soils remaining in place, indicate combined TPH GRO/DRO/MRO concentrations ranging from 11 mg/kg (SP-3) to 63 mg/kg (CS-13), which do not exceed the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site indicate combined TPH GRO/DRO/MRO is not present in concentrations greater than the laboratory PQLs, which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg.
- The laboratory analytical results for composite soil samples CS-4, CS-7, CS-8, SP-1 and SP-4 collected from soils remaining in place, indicate combined chloride concentrations ranging from 75 mg/kg (SP-1) to 400 mg/kg (CS-7), which do not exceed the New Mexico EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site indicate chloride is not present in concentrations greater than laboratory PQLs, which are less than the New Mexico EMNRD OCD closure criteria of 600 mg/kg for chlorides.

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

7.0 RECLAMATION AND RE-VEGETATION

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

8.0 FINDINGS AND RECOMMENDATION

During March 2019, Enterprise performed hydrostatic pressure testing on the Lateral 3A-2 pipeline to evaluate the integrity of the pipeline. During the pressure test, a leak was identified. The resulting release was characterized by discoloration on the ground surface and a flow path that traveled south from the point of release. Enterprise subsequently initiated activities to facilitate the repair of the pipeline and to remediate potential petroleum hydrocarbon impact resulting from the release.

- The primary objective of the closure activities was to reduce COC concentrations in the on-Site soils to below the applicable New Mexico EMNRD OCD closure criteria using the New Mexico EMNRD OCD's NMAC 19.15.29 *Releases* as guidance.
- A total of 21 composite soil samples were collected from the walls and floor of the final excavation for laboratory analysis. In addition, 10 composite soil samples were collected from the flow path and four (4) composite stockpiled soil samples were collected from stockpiled soils. Based on soil laboratory analytical results, soils remaining in place do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.



 A total of approximately 136 yd³ of petroleum hydrocarbon affected soils were transported to the IEI landfarm on Crouch Mesa near Aztec, New Mexico for disposal/remediation. The excavation was backfilled with a combination of imported fill and the segregated, laboratory-confirmed, unaffected stockpiled soils, and was then contoured to surrounding grade.

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

9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

9.1 Standard of Care

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

9.2 Additional Limitations

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

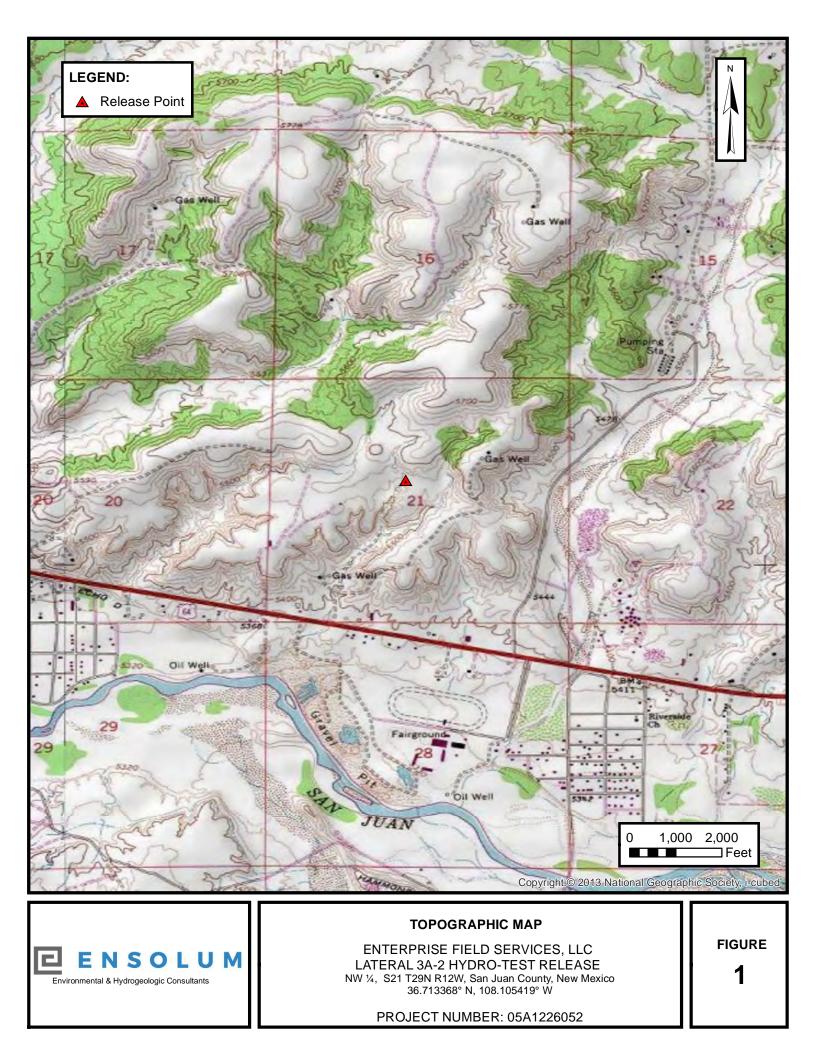
9.3 Reliance

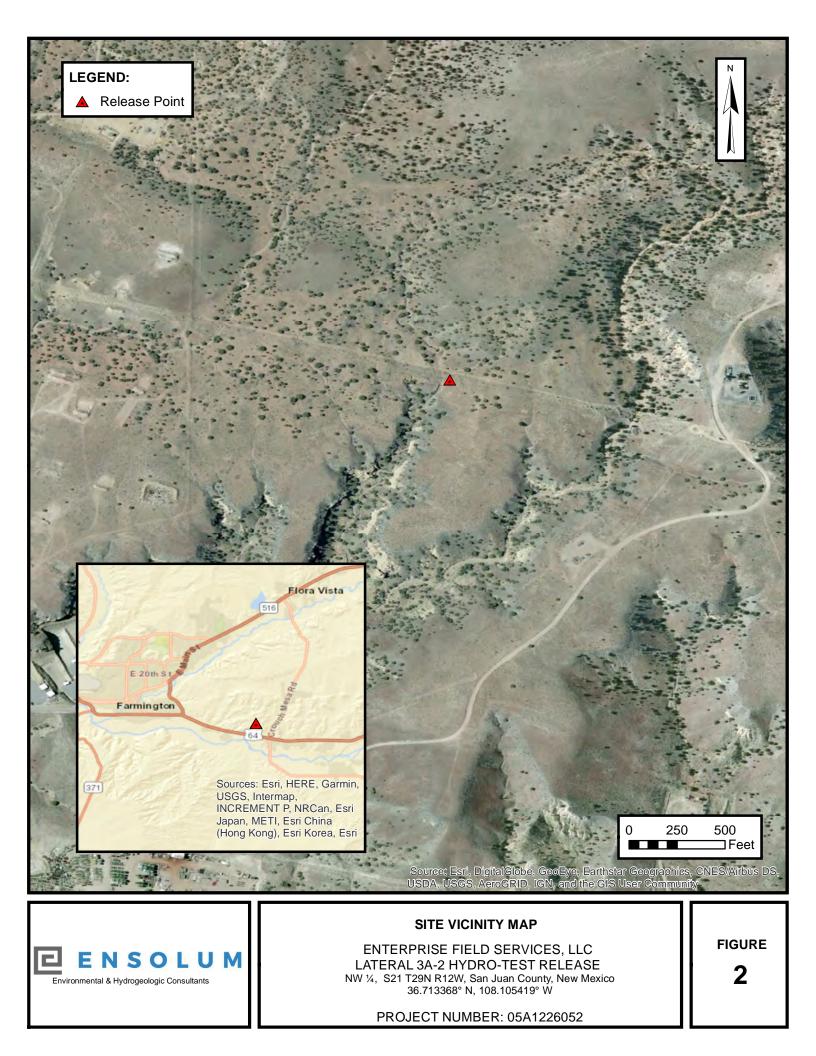
This report has been prepared for the exclusive use of Enterprise Products Operating LLC, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization Enterprise Products Operating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

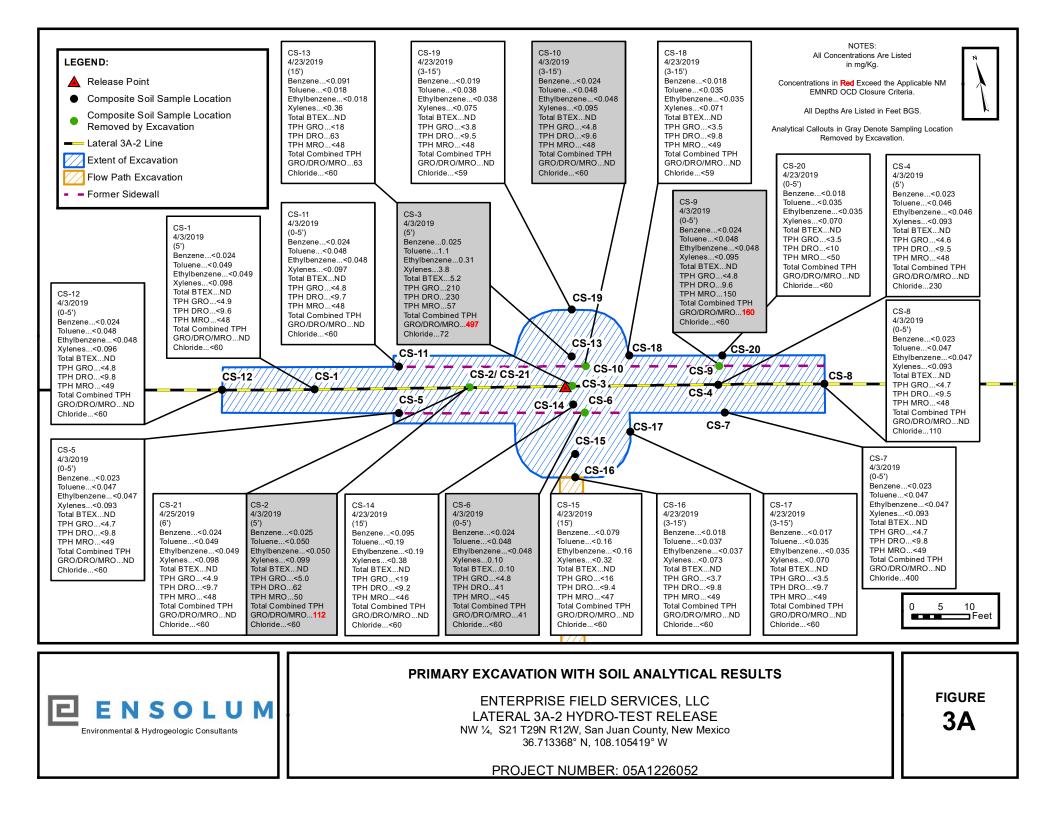


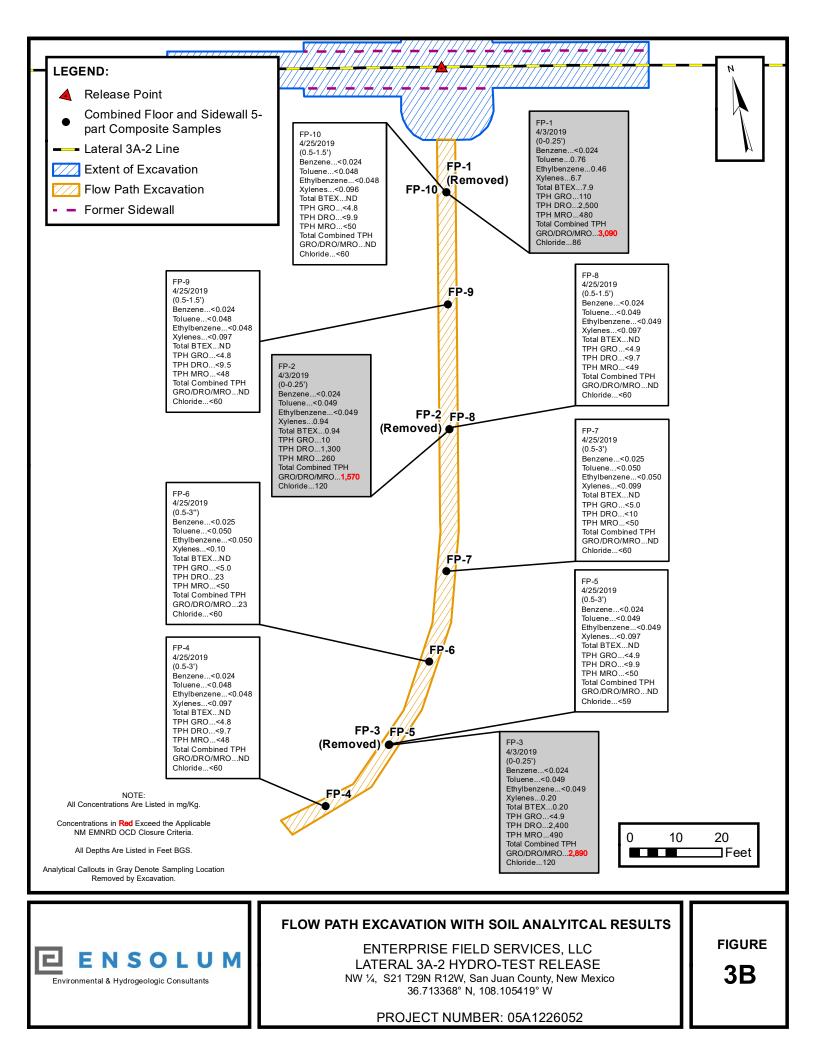
APPENDIX A

Figures











APPENDIX B

Executed C-138 Solid Waste Acceptance Form

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

State of New Mexico Energy Minerals and Natural R Oil Conservation Divis 1220 South St. Francis Dr. Santa Fe, NM 87505 1

Form C-138 Revised 08/01/11

S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505	
REQUEST FOR APPROVAL TO ACCEPT SOLID V	WASTE
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401	
2. Originating Site: Lateral 3A-2	
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter F Section 21 T29N R 12W; 36.713375, -108.713375	4/26/19-3640 4/25/19-1240 4/25/19-1240
 Source and Description of Waste: Source: Lateral 3A-2 Pipeline Description: Hydrocarbon/water soil from a Natural Gas pipeline release. 	60 yds 4-24-19
Estimated Volume <u>50</u> yd ³ (bb) Known Volume (to be entered by the operator at the end of the haul)	
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STAT	
I, Thomas Long <i>There is a the products of the product of </i>	y
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmenta regulatory determination, the above described waste is: (Check the appropriate classification)	l Protection Agency's July 1988
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operation exempt waste. <u>Operator Use Only: Waste Acceptance Frequency Monthly</u> Weekly	ns and are not mixed with non- Per Load
☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as subpart D, as amended. The following documentation is attached to demonstrate the above-described the appropriate items)	defined in 40 CFR, part 261,
□ MSDS Information □ RCRA Hazardous Waste Analysis □ Process Knowledge □ Other (Pro	ovide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR	LANDFARMS
I, Thomas Long4-22-19, representative for Enterprise Products Operating authorizes <u>IEI, In</u> Generator Signature the required testing/sign the Generator Waste Testing Certification. I, representative for <u>IEI, Inc.</u> do herely representative samples of the oil field waste have been subjected to the paint filter test and tested for chlor have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 o of the representative samples are attached to demonstrate the above-described waste conform to the require 19.15.36 NMAC.	by certify that ride content and that the samples f 19.15.36 NMAC. The results
OCD Permitted Surface Waste Management Facility	
Name and Facility Permit #: *JFJ Landfarm/Industrial Ecosystems, Inc. * Permit #: NM 01-0010 Address of Facility: #49 CR 2150 Aztec, New Mexico	B CL-468
Method of Treatment and/or Disposal:] Other PH
Waste Acceptance Status:	(aintained As Permanent Record) DATE: 42219
	Haase

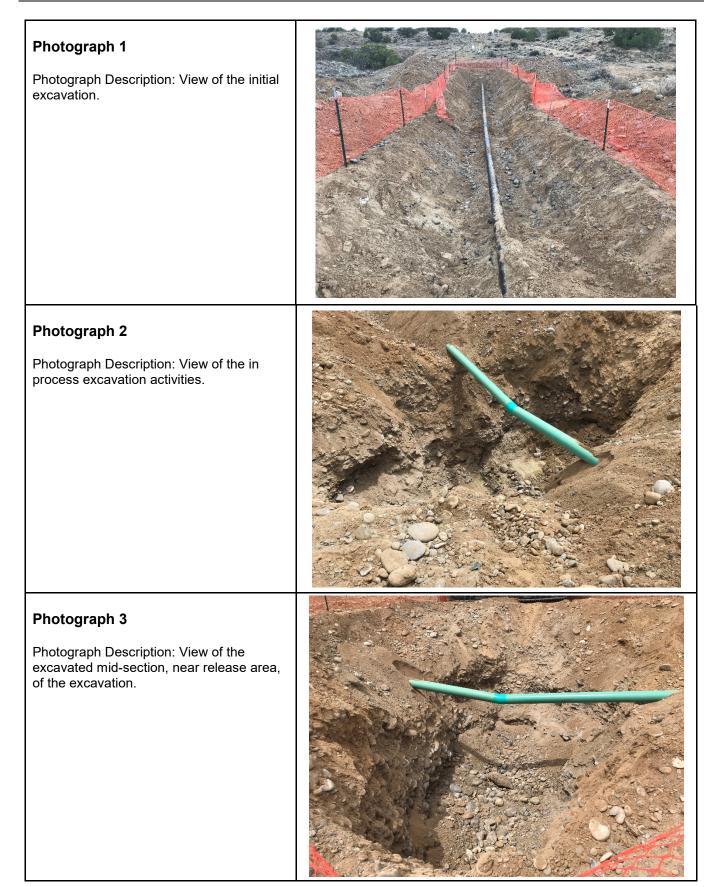


APPENDIX C

Photographic Documentation

Enterprise Field Services, LLC Closure Report Lateral 3A-2 Hydro-Test Release Ensolum Project No. 05A1226052





Enterprise Field Services, LLC Closure Report Lateral 3A-2 Hydro-Test Release Ensolum Project No. 05A1226052



Photograph 4

Photograph Description: View of the excavated western mid-section of the excavation.



Photograph 5

Photograph Description: View of initial release flow path.



Photograph 6

Photograph Description: View of initial release flow path.



Enterprise Field Services, LLC Closure Report Lateral 3A-2 Hydro-Test Release Ensolum Project No. 05A1226052



Photograph 7

Photograph Description: View of initial release flow path.



Photograph 8

Photograph Description: View of the final excavated flow path.



Photograph 9

Photograph Description: View of the final excavated flow path.



Enterprise Field Services, LLC Closure Report Lateral 3A-2 Hydro-Test Release Ensolum Project No. 05A1226052



Photograph 10

Photograph Description: View of the final excavated flow path.



Photograph 11

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





APPENDIX D

Table 1 – Soil Analytical Summary

ENSOLUM

						TAE	SLE 1						
					La	teral 3A-3 Hyd	dro-Test Rel	ease					
_						SOIL ANALYT	ICAL SUMMAI	RY					
Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO	TPH DRO	TPH MRO	Total Combined TPH (GRO/DRO/MRO)	Chloride (mg/kg)
									(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
		Natural Resources		10	NE	NE	NE	50			<u> </u>	100	600
	04.00.40	-	- 1			ry Composite Soil Sa	· · ·	-			E 6		
CS-2	04.03.19	С	5	<0.025	<0.050	< 0.050	<0.099	ND	<5.0	62	50	112	<60
<u>CS-3</u>	04.03.19	C	5	0.025	1.1	0.31	3.8	5.2	210	230	57	497	72
CS-6	04.03.19 04.03.19	C C	0 to 5	< 0.024	<0.048 <0.048	< 0.048	0.10	0.10 ND	<4.8 <4.8	41 9.6	<45 150	41 160	<60 <60
CS-9 CS-10	04.03.19	C	0 to 5 0 to 5	<0.024	<0.048	<0.048 <0.048	<0.095	ND ND	<4.8	9.6 <9.6	150 <48	160 ND	<60 <60
FP-1	04.03.19	c	0 to 0.25	<0.024	0.76	0.46	6.7	7.9	110	2,500	480	3,090	×00 86
FP-1 FP-2	04.03.19	c	0 to 0.25	<0.024	< 0.049	< 0.049	0.94	0.94	10	1,300	260	1,570	120
FP-3	04.03.19	C	0 to 0.25	< 0.024	<0.049	< 0.049	0.20	0.20	<4.9	2,400	490	2,890	120
	04.00.10		5100.20	-0.02-1		Final Flow Path Cor			-1.0	2,400		2,000	.20
FP-4	04.25.19	С	0.5 to 3	< 0.024	< 0.048	<0.048	< 0.097	ND	<4.8	<9.7	<48	ND	<60
FP-5	04.25.19	С	0.5 to 3	< 0.024	< 0.049	< 0.049	< 0.097	ND	<4.9	<9.9	<50	ND	<59
FP-6	04.25.19	С	0.5 to 3	<0.025	< 0.050	< 0.050	<0.10	ND	<5.0	23	<50	23	<60
FP-7	04.25.19	С	0.5 to 3	<0.025	< 0.050	< 0.050	<0.099	ND	<5.0	<10	<50	ND	<60
FP-8	04.25.19	С	0.5 to 1.5	<0.024	<0.049	<0.049	<0.097	ND	<4.9	<9.7	<49	ND	<60
FP-9	04.25.19	С	0.5 to 1.5	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.5	<48	ND	<60
FP-10	04.25.19	С	0.5 to 1.5	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.9	<50	ND	<60
						Stockpile Compo	osite Soil Samples	5					
SP-1	04.03.19	С	Stockpile	<0.024	<0.048	<0.048	<0.095	ND	<4.8	<9.7	<48	ND	75
SP-2	04.03.19	С	Stockpile	<0.024	<0.047	<0.047	<0.095	ND	<4.7	<9.7	<49	ND	<60
SP-3	04.03.19	С	Stockpile	<0.023	<0.047	<0.047	<0.093	ND	<4.7	11	<50	11	<60
SP-4	04.03.19	С	Stockpile	<0.023	<0.047	<0.047	<0.093	ND	<4.7	<9.3	<46	ND	230
	*					inal Confirmation Co					*		
CS-1	04.03.19	С	5	<0.024	<0.049	<0.049	<0.098	ND	<4.9	<9.6	<48	ND	<60
CS-4	04.03.19	С	5	<0.023	< 0.046	< 0.046	< 0.093	ND	<4.6	<9.5	<48	ND	230
CS-5	04.03.19	С	0 to 5	<0.023	< 0.047	< 0.047	< 0.093	ND	<4.7	<9.8	<49	ND	<60
CS-7	04.03.19	c	0 to 5	<0.023	< 0.047	< 0.047	< 0.093	ND	<4.7	<9.8	<49	ND	400
CS-8	04.03.19	C C	0 to 5	<0.023	< 0.047	< 0.047	< 0.093	ND	<4.7	<9.5	<48	ND	110 <60
CS-11 CS-12	04.03.19 04.03.19		0 to 5	<0.024	<0.048 <0.048	<0.048 <0.048	<0.097	ND ND	<4.8	<9.7 <9.8	<48 <49	ND ND	<60 <60
CS-12 CS-13	04.03.19	C C	0 to 5 15	<0.024	<0.048	<0.048		ND ND	<4.8 <18	<9.8 63	<49 <48	ND 63	<60 <60
CS-13 CS-14	04.23.19	C C	15	<0.091	<0.18	<0.18	<0.36 <0.38	ND	<18	63 <9.2	<48 <46	63 ND	<60
CS-14 CS-15	04.23.19	C C	15	<0.095	<0.19	<0.19	< 0.38	ND	<19	<9.2	<40 <47	ND	<00
CS-15 CS-16	04.23.19	C C	3 to 15	<0.079	<0.037	<0.037	<0.32	ND	<3.7	<9.8	<47 <49	ND	<00
CS-10	04.23.19	C	3 to 15	<0.010	<0.037	< 0.035	<0.073	ND	<3.5	<9.0	<49	ND	<60
CS-17	04.23.19	C	3 to 15	<0.017	<0.035	< 0.035	<0.070	ND	<3.5	<9.8	<49 <49	ND	<59
CS-19	04.23.19	C	3 to 15	<0.010	<0.035	< 0.038	<0.071	ND	<3.8	<9.5	<48	ND	<59
CS-20	04.23.19	C	0 to 5	<0.018	< 0.035	< 0.035	< 0.070	ND	<3.5	<10	<50	ND	<60
CS-21	04.25.19	C	6	< 0.024	< 0.049	< 0.049	< 0.098	ND	<4.9	<9.7	<48	ND	<60

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

ND = Not Detected above the Practical Quantitation Limits

NA = Not Analyzed

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

TPH = Total Petroleum Hydrocarbon



APPENDIX E

Laboratory Data Sheets & Chain of Custody Documentation



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

April 08, 2019

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

OrderNo.: 1904255

Dear Kyle Summers:

RE: Lateral 3A 2

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/4/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 4/8/2019

CLIENT: ENSOLUM		Cl	ient Sample II	D: SP	-1					
Project: Lateral 3A 2	Collection Date: 4/3/2019 11:10:00 AM									
Lab ID: 1904255-001	Matrix: SOIL		/2019 8:14:00 AM							
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analys	t: MRA				
Chloride	75	60	mg/Kg	20	4/5/2019 4:03:27 PM	44147				
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analys	t: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/5/2019 9:24:10 PM	44128				
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/5/2019 9:24:10 PM	44128				
Surr: DNOP	106	70-130	%Rec	1	4/5/2019 9:24:10 PM	44128				
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: RAA				
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/6/2019 7:19:07 PM	44112				
Surr: BFB	87.2	73.8-119	%Rec	1	4/6/2019 7:19:07 PM	44112				
EPA METHOD 8021B: VOLATILES					Analys	t: RAA				
Benzene	ND	0.024	mg/Kg	1	4/6/2019 7:19:07 PM	44112				
Toluene	ND	0.048	mg/Kg	1	4/6/2019 7:19:07 PM	44112				
Ethylbenzene	ND	0.048	mg/Kg	1	4/6/2019 7:19:07 PM	44112				
Xylenes, Total	ND	0.095	mg/Kg	1	4/6/2019 7:19:07 PM	44112				
Surr: 4-Bromofluorobenzene	88.8	80-120	%Rec	1	4/6/2019 7:19:07 PM	44112				

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

Qualifiers:

S

 H
 Holding times for preparation or analysis exceeded

 PQL
 Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

Date Reported: 4/8/2019

CLIENT: ENSOLUM	Client Sample ID: SP-2 Collection Date: 4/3/2019 11:15:00 AM									
Project: Lateral 3A 2										
Lab ID: 1904255-002	Matrix: SOIL Received Date: 4/4/2019 8:14:00 A									
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	MRA				
Chloride	ND	60	mg/Kg	20	4/5/2019 6:19:57 PM	44165				
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/5/2019 10:30:42 PM	44128				
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/5/2019 10:30:42 PM	44128				
Surr: DNOP	100	70-130	%Rec	1	4/5/2019 10:30:42 PM	44128				
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA				
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/6/2019 7:42:46 PM	44112				
Surr: BFB	88.0	73.8-119	%Rec	1	4/6/2019 7:42:46 PM	44112				
EPA METHOD 8021B: VOLATILES					Analyst	: RAA				
Benzene	ND	0.024	mg/Kg	1	4/6/2019 7:42:46 PM	44112				
Toluene	ND	0.047	mg/Kg	1	4/6/2019 7:42:46 PM	44112				
Ethylbenzene	ND	0.047	mg/Kg	1	4/6/2019 7:42:46 PM	44112				
Xylenes, Total	ND	0.095	mg/Kg	1	4/6/2019 7:42:46 PM	44112				
Surr: 4-Bromofluorobenzene	90.0	80-120	%Rec	1	4/6/2019 7:42:46 PM	44112				

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

Qualifiers:

S

Н Holding times for preparation or analysis exceeded PQL Practical Quanitative Limit

ND Not Detected at the Reporting Limit

% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

RL Reporting Detection Limit W

Sample container temperature is out of limit as specified at testcode

Page 2 of 10

Date Reported: 4/8/2019

CLIENT: ENSOLUM Project: Lateral 3A 2	Client Sample ID: SP-3 Collection Date: 4/3/2019 11:20:00 AM									
Lab ID: 1904255-003	Matrix: SOIL Received Date: 4/4/2019 8:14:00 A									
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	MRA				
Chloride	ND	60	mg/Kg	20	4/5/2019 6:57:11 PM	44165				
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	: Irm				
Diesel Range Organics (DRO)	11	10	mg/Kg	1	4/5/2019 10:52:51 PM	44128				
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/5/2019 10:52:51 PM	44128				
Surr: DNOP	110	70-130	%Rec	1	4/5/2019 10:52:51 PM	44128				
EPA METHOD 8015D: GASOLINE RANGE	i i				Analyst	RAA				
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/6/2019 8:06:24 PM	44112				
Surr: BFB	89.4	73.8-119	%Rec	1	4/6/2019 8:06:24 PM	44112				
EPA METHOD 8021B: VOLATILES					Analyst	: RAA				
Benzene	ND	0.023	mg/Kg	1	4/6/2019 8:06:24 PM	44112				
Toluene	ND	0.047	mg/Kg	1	4/6/2019 8:06:24 PM	44112				
Ethylbenzene	ND	0.047	mg/Kg	1	4/6/2019 8:06:24 PM	44112				
Xylenes, Total	ND	0.093	mg/Kg	1	4/6/2019 8:06:24 PM	44112				
Surr: 4-Bromofluorobenzene	90.8	80-120	%Rec	1	4/6/2019 8:06:24 PM	44112				

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

Qualifiers:

S

 H
 Holding times for preparation or analysis exceeded

 PQL
 Practical Quanitative Limit

ND Not Detected at the Reporting Limit

% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

Page 3 of 10

Date Reported: 4/8/2019

CLIENT: ENSOLUM	Client Sample ID: SP-4 Collection Date: 4/3/2019 11:25:00 AM									
Project: Lateral 3A 2										
Lab ID: 1904255-004	Matrix: SOIL Received Date: 4/4/2019 8:14:00									
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	MRA				
Chloride	230	60	mg/Kg	20	4/5/2019 7:09:36 PM	44165				
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	: Irm				
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	4/5/2019 11:14:49 PM	44128				
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/5/2019 11:14:49 PM	44128				
Surr: DNOP	100	70-130	%Rec	1	4/5/2019 11:14:49 PM	44128				
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA				
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/6/2019 8:30:01 PM	44112				
Surr: BFB	89.0	73.8-119	%Rec	1	4/6/2019 8:30:01 PM	44112				
EPA METHOD 8021B: VOLATILES					Analyst	RAA				
Benzene	ND	0.023	mg/Kg	1	4/6/2019 8:30:01 PM	44112				
Toluene	ND	0.047	mg/Kg	1	4/6/2019 8:30:01 PM	44112				
Ethylbenzene	ND	0.047	mg/Kg	1	4/6/2019 8:30:01 PM	44112				
Xylenes, Total	ND	0.093	mg/Kg	1	4/6/2019 8:30:01 PM	44112				
Surr: 4-Bromofluorobenzene	90.2	80-120	%Rec	1	4/6/2019 8:30:01 PM	44112				

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

Qualifiers:

S

 H
 Holding times for preparation or analysis exceeded

 PQL
 Practical Quanitative Limit

- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

Page 4 of 10

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904255**

08-Apr-19

Client:	ENSOLUM									
Project:	Lateral 3A 2	2								
Sample ID: MB	3-44147	SampType:	nblk	Tes	tCode: EP	A Method	300.0: Anions	5		
Client ID: PB	S	Batch ID:	44147	F	unNo: 58	920				
Prep Date: 4/	/5/2019 A	nalysis Date:	4/5/2019	S	eqNo: 19	82048	Units: mg/K	g		
Analyte Chloride		Result PQ ND 1	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
			.0							
Sample ID: LC:	S-44147	SampType:	cs	Tes	tCode: EP	A Method	300.0: Anions	5		
Client ID: LC:	SS	Batch ID:	44147	F	tunNo: 58	920				
Prep Date: 4/	/5/2019 A	nalysis Date:	4/5/2019	S	eqNo: 19	82049	Units: mg/K	g		
Analyte		Result PQ	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14 1	5 15.00	0	92.7	90	110			
Sample ID: MB	3-44165	SampType:	mblk	Tes	tCode: EP	A Method	300.0: Anions	5		
Client ID: PB	S	Batch ID:	44165	F	unNo: 58	920				
Prep Date: 4/	/5/2019 A	nalysis Date:	4/5/2019	S	SeqNo: 19	82078	Units: mg/K	g		
Analyte		Result PQ	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND 1	5							
Sample ID: LC:	S-44165	SampType:	cs	Tes	tCode: EP	A Method	300.0: Anions	6		
Client ID: LC	SS	Batch ID:	44165	F	unNo: 58	920				
Prep Date: 4/	/5/2019 A	nalysis Date:	4/5/2019	S	eqNo: 19	82079	Units: mg/K	g		
Analyte		Result PQ	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14 1	.5 15.00	0	93.3	90	110			

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1904255

08-Apr-19

Client: ENSOLU	JM			
Project: Lateral 3	A 2			
Sample ID: LCS-44142	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Orga	nics
Client ID: LCSS	Batch ID: 44142	RunNo: 58917		
Prep Date: 4/5/2019	Analysis Date: 4/5/2019	SeqNo: 1981087	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDI	imit Qual
Surr: DNOP	4.4 5.000	87.5 70	130	dual
Sample ID: MB-44142	SampType: MBLK	TestCode: FPA Method	8015M/D: Diesel Range Orga	nics
Client ID: PBS	Batch ID: 44142	RunNo: 58917	••••••••••••••••••••••••••••••••••••••	
Prep Date: 4/5/2019	Analysis Date: 4/5/2019	SeqNo: 1981088	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDI	imit Qual
Surr: DNOP	10 10.00	101 70	130	
Sample ID: LCS-44128	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Orgai	nics
Client ID: LCSS	Batch ID: 44128	RunNo: 58917		
Prep Date: 4/4/2019	Analysis Date: 4/5/2019	SeqNo: 1982023	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDI	imit Qual
Diesel Range Organics (DRO)	47 10 50.00	0 95.0 63.9	124	
Surr: DNOP	4.3 5.000	86.1 70	130	
Sample ID: MB-44128	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Orga	nics
Client ID: PBS	Batch ID: 44128	RunNo: 58917		
Prep Date: 4/4/2019	Analysis Date: 4/5/2019	SeqNo: 1982024	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDI	imit Qual
Diesel Range Organics (DRO)	ND 10			
Motor Oil Range Organics (MRO) Surr: DNOP	ND 50 9.8 10.00	98.1 70	130	
0				
Sample ID: 1904255-001AMS	0	Table de EDA Mathad		
Client ID: SP 1			8015M/D: Diesel Range Orga	nics
Client ID: SP-1	Batch ID: 44128	RunNo: 58917		lics
Prep Date: 4/4/2019	Batch ID: 44128 Analysis Date: 4/5/2019	RunNo: 58917 SeqNo: 1982026	Units: mg/Kg	
Prep Date: 4/4/2019 Analyte	Batch ID: 44128 Analysis Date: 4/5/2019 Result PQL SPK value	RunNo: 58917 SeqNo: 1982026 SPK Ref Val %REC LowLimit	Units: mg/Kg HighLimit %RPD RPDI	
Prep Date: 4/4/2019 Analyte	Batch ID: 44128 Analysis Date: 4/5/2019	RunNo: 58917 SeqNo: 1982026	Units: mg/Kg	
Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP	Batch ID: 44128 Analysis Date: 4/5/2019 Result PQL SPK value 54 9.8 48.92 5.0 4.892	RunNo: 58917 SeqNo: 1982026 SPK Ref Val %REC LowLimit 0 110 53.5 103 70	Units: mg/Kg HighLimit %RPD RPDI 126	.imit Qual
Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO)	Batch ID: 44128 Analysis Date: 4/5/2019 Result PQL SPK value 54 9.8 48.92 5.0 4.892	RunNo: 58917 SeqNo: 1982026 SPK Ref Val %REC LowLimit 0 110 53.5 103 70	Units: mg/Kg HighLimit %RPD RPDI 126 130	.imit Qual
Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 1904255-001AMS	Batch ID: 44128 Analysis Date: 4/5/2019 Result PQL SPK value 54 9.8 48.92 5.0 4.892 5D SampType: MSD	RunNo: 58917 SeqNo: 1982026 SPK Ref Val %REC LowLimit 0 110 53.5 103 70	Units: mg/Kg HighLimit %RPD RPDI 126 130	.imit Qual
Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 1904255-001AMS Client ID: SP-1	Batch ID: 44128 Analysis Date: 4/5/2019 Result PQL SPK value 54 9.8 48.92 5.0 4.892 5D SampType: MSD Batch ID: 44128 Analysis Date: 4/5/2019	RunNo:: 58917 SeqNo:: 1982026 SPK Ref Val %REC 0 110 53.5 103 70	Units: mg/Kg HighLimit %RPD RPDI 126 130 8015M/D: Diesel Range Organ	.imit Qual hics

Qualifiers:

s

H Holding times for preparation or analysis exceeded

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

W Sample container temperature is out of limit as specified at testcode

Page 6 of 10

ND Not Detected at the Reporting Limit

Client:ENSOLUMProject:Lateral 3A 2

Sample ID: 1904255-001AMS	D SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics	
Client ID: SP-1	Batch ID: 44128	RunNo: 58917	
Prep Date: 4/4/2019	Analysis Date: 4/5/2019	SeqNo: 1982027 Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu	Jal
Surr: DNOP	4.7 4.836	97.7 70 130 0 0	
Sample ID: LCS-44110	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics	
Client ID: LCSS	Batch ID: 44110	RunNo: 58917	
Prep Date: 4/4/2019	Analysis Date: 4/6/2019	SeqNo: 1983117 Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu	lal
Surr: DNOP	4.4 5.000	88.3 70 130	
Sample ID: MB-44110	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics	
Client ID: PBS	Batch ID: 44110	RunNo: 58917	
Prep Date: 4/4/2019	Analysis Date: 4/6/2019	SeqNo: 1983118 Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu	Jal
Surr: DNOP	9.1 10.00	90.9 70 130	

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: **1904255**

08-Apr-19

Client: ENSOLUM Project: Lateral 3A 2 Sample ID: LCS-44112 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 44112 RunNo: 58955 Prep Date: Analysis Date: 4/6/2019 SeqNo: 1982861 4/4/2019 Units: mg/Kg PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analvte Result LowLimit Qual 25.00 Gasoline Range Organics (GRO) 23 5.0 Λ 90.1 80.1 123 Surr: BFB 1000 1000 104 73.8 119 Sample ID: LCS-44113 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 44113 RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/7/2019 SeqNo: 1982863 Units: %Rec Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: BFB 1000 1000 101 73.8 119 Sample ID: LCS-44114 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 44114 RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/7/2019 SeqNo: 1982864 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 990 1000 Surr: BFB 98.9 73.8 119 Sample ID: MB-44112 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: Batch ID: 44112 PBS RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/6/2019 SeqNo: 1982865 Units: mg/Kg PQL SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Analyte Result LowLimit Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 940 1000 94.0 73.8 119 Sample ID: MB-44113 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 44113 RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/7/2019 SeqNo: 1982866 Units: %Rec PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte Result LowLimit Surr: BFB 910 1000 90.8 73.8 119 Sample ID: MB-44114 TestCode: EPA Method 8015D: Gasoline Range SampType: MBLK Batch ID: 44114 Client ID: PBS RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/7/2019 SeqNo: 1982867 Units: %Rec PQL SPK value SPK Ref Val %REC %RPD RPDLimit Analyte Result LowLimit HighLimit Qual 890 1000 Surr: BFB 89.0 73.8 119

Qualifiers:

PQL

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

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

W Sample container temperature is out of limit as specified at testcode

Page 8 of 10

	DLUM al 3A 2								
Sample ID: LCS-44112	SampType: LCS	;	Test	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batch ID: 441	12	R	RunNo: 58	3955				
Prep Date: 4/4/2019	Analysis Date: 4/6	/2019	S	SeqNo: 19	982924	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84 0.025	1.000	0	83.7	80	120			
Toluene	0.90 0.050	1.000	0	90.1	80	120			
Ethylbenzene	0.89 0.050	1.000	0	89.3	80	120			
Xylenes, Total	2.7 0.10	3.000	0	90.5	80	120			
Surr: 4-Bromofluorobenzene	0.94	1.000		93.9	80	120			
Sample ID: LCS-44113	SampType: LCS	5	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batch ID: 441	13	R	RunNo: 58	3955				
Prep Date: 4/4/2019	Analysis Date: 4/7	/2019	S	SeqNo: 19	82925	Units: %Rec			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92	1.000		92.1	80	120			
Sample ID: LCS-44114	SampType: LCS	5	Test	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batch ID: 441	14	R	RunNo: 58	3955				
Prep Date: 4/4/2019	Analysis Date: 4/7	/2019	S	SeqNo: 19	982926	Units: %Rec			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89	1.000		89.3	80	120			
Sample ID: MB-44112	SampType: MBI	_K	Test	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Batch ID: 441	12	R	RunNo: 58	3955				
Prep Date: 4/4/2019	Analysis Date: 4/6	/2019	S	SeqNo: 19	982927	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	0.95	1.000		95.0	80	120			
Sample ID: MB-44113	SampType: MBI	_K	Test	tCode: EF	A Method	8021B: Volati	les		
Client ID: PBS	Batch ID: 441	13	R	RunNo: 58	3955				
	Analysis Date: 4/7	/2019	S	SeqNo: 19	982928	Units: %Rec			
Prep Date: 4/4/2019									
Prep Date: 4/4/2019 Analyte		SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

s

 H
 Holding times for preparation or analysis exceeded

 PQL
 Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

Page 9 of 10

WO#: **1904255**

ND Not Detected at the Reporting Limit

0.90

	OLUM ral 3A 2
Sample ID: MB-44114	SampType: MBLK TestCode: EPA Method 8021B: Volatiles
Client ID: PBS	Batch ID: 44114 RunNo: 58955
Prep Date: 4/4/2019	Analysis Date: 4/7/2019 SeqNo: 1982929 Units: %Rec
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

89.9

80

120

1.000

Surr: 4-Bromofluorobenzene

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

- S % Recovery outside of range due to dilution or matrix
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

Alb TEL: 505-345-3973	490 uquerq 5 FAX:	1 Hawkin ue, NM 87 505-345-4	s NE 7109 S 4107	amp	ole Log-In Check List	t
Work Order Number	: 1904	4255			RcptNo: 1	
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4/4/2019/9:30:21 AM			ú n	1		
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	Yes	\checkmark	No [Not Present	
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s?	Yes	✓	No [
re of >0° C to 6.0°C	Yes	✓	No [
	Yes	✓	No [
t(s)?	Yes	✓	No 🗌			
erly preserved?	Yes	\checkmark	No 🗌]		
	Yes		No 🗹	•	NA 🗌	
	Yes		No 🗌	1	No VOA Vials 🗹 🛛 /	
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	Yes	\checkmark	No 🗌		Checked/by: 16 919	1] 12
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h this order?	Yes		No [NA 🗹	
Date: Via:] eMa	ail 🗌 Pl	hone 🗌 F	ax [] In Person	
	Alb TEL: 505-345-3973 Website: www.he Work Order Number 4/4/2019 8:14:00 AM 4/4/2019 9:30:21 AM 4/4/2019 9:30:21 AM 4/4//////////////////////////////////	490 Albuquerq TEL: 505-345-3975 FAX: Website: www.hallenvin Work Order Number: 1904 4/4/2019 8:14:00 AM 4/4/2019 9:30:21 AM 4/4/2019 9:30 4/4 4/4 4/4 4/4 4/4 4/4 4/4 4/4 4/4 4/	4901 Hawkin Albuquerque, NM 8 TEL: 505-345-3975 FAX: 505-345- Website: www.hallenvironmental Work Order Number: 1904255 4/4/2019 8:14:00 AM 4/4/2019 9:30:21 AM 4/4/2019 9:30:21 AM 4/4/2019 9:30:21 AM Yes Yes s? Yes re of >0° C to 6.0°C Yes Yes t(s)? Yes ken? Yes Yes	TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com Work Order Number: 1904255 4/4/2019 8:14:00 AM Appin fa 4/4/2019 8:14:00 AM Appin fa 4/4/2019 9:30:21 AM M Yes V S? Yes Yes No Courier No s? Yes Yes No Yes No Yes No re of >0° C to 6.0°C Yes Yes No Yes <	4901 Hawkins NE Albuquerque, NM 87100 TEL: 505-345-3975 FAX: 505-345-4107 Work Order Number: 1904255 4/4/2019 8:14:00 AM Appin lighter 4/4/2019 8:14:00 AM Appin lighter 4/4/2019 9:30:21 AM MMM 4/4/2019 9:30:21 AM MMM Yes No s? Yes No re of >0° C to 6.0°C Yes No Yes No Impin lighter t(s)? Yes No	Jabaguergue, NM 87109 Sample Log-In Check List TEL: 505:345:307 Work Order Number: 1904255 RcptNo: 1 4/4/2019 8:14:00 AM

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			
2	3.1	Good	Yes			

Image: Construction Image: Construction SHULD Project Nam Cound C Project Man Visoluth.com Project Man I 4 (Full Validation) Project Man I 4 (Full Validation) Sampler: SP-1 I) Wee-Ter SP-1 I) Wee-Ter SP-1 I) Yoe and # SP-1 I) Yoe and # SP-4 I) Yoe Tar			
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

April 09, 2019

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

OrderNo.: 1904250

RE: Lateral 3A 2

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 12 sample(s) on 4/4/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> 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

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Lateral 3A 2

Project:

Client Sample ID: CS-1

Collection Date: 4/3/2019 10:00:00 AM Received Date: 4/4/2019 8:14:00 AM

Lab ID: 1904250-001	Matrix: SOIL		Received Dat	e: 4/4	4/2019 8:14:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	ND	60	mg/Kg	20	4/5/2019 11:42:52 AM	44147
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/6/2019 11:46:17 AM	44111
Surr: BFB	107	70-130	%Rec	1	4/6/2019 11:46:17 AM	44111
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS				Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/5/2019 9:22:33 AM	44127
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/5/2019 9:22:33 AM	44127
Surr: DNOP	109	70-130	%Rec	1	4/5/2019 9:22:33 AM	44127
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst:	RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 2:56:04 AM	44111
Toluene	ND	0.049	mg/Kg	1	4/7/2019 2:56:04 AM	44111
Ethylbenzene	ND	0.049	mg/Kg	1	4/7/2019 2:56:04 AM	44111
Xylenes, Total	ND	0.098	mg/Kg	1	4/7/2019 2:56:04 AM	44111
Surr: 1,2-Dichloroethane-d4	85.6	70-130	%Rec	1	4/7/2019 2:56:04 AM	44111
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	4/7/2019 2:56:04 AM	44111
Surr: Dibromofluoromethane	89.2	70-130	%Rec	1	4/7/2019 2:56:04 AM	44111
Surr: Toluene-d8	95.7	70-130	%Rec	1	4/7/2019 2:56:04 AM	44111

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

Qualifiers:

- EValue above quantitation rangeNDNot Detected at the Reporting Limit
- RL Reporting Detection Limit

- H Holding times for preparation or analysis exceededPQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

W Sample container temperature is out of limit as specified at testcode

Date Reported: 4/9/2019

CLIENT: ENSOLUM		CI	ient Sample II		2.2	
			-			
Project: Lateral 3A 2					3/2019 10:05:00 AM	
Lab ID: 1904250-002	Matrix: SOIL		Received Dat	e: 4/4	4/2019 8:14:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	4/5/2019 11:55:17 AM	44147
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/6/2019 12:14:55 PM	44111
Surr: BFB	103	70-130	%Rec	1	4/6/2019 12:14:55 PM	44111
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	CLP
Diesel Range Organics (DRO)	62	9.7	mg/Kg	1	4/5/2019 2:41:57 PM	44127
Motor Oil Range Organics (MRO)	50	48	mg/Kg	1	4/5/2019 2:41:57 PM	44127
Surr: DNOP	109	70-130	%Rec	1	4/5/2019 2:41:57 PM	44127
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	RAA
Benzene	ND	0.025	mg/Kg	1	4/7/2019 3:24:37 AM	44111
Toluene	ND	0.050	mg/Kg	1	4/7/2019 3:24:37 AM	44111
Ethylbenzene	ND	0.050	mg/Kg	1	4/7/2019 3:24:37 AM	44111
Xylenes, Total	ND	0.099	mg/Kg	1	4/7/2019 3:24:37 AM	44111
Surr: 1,2-Dichloroethane-d4	85.7	70-130	%Rec	1	4/7/2019 3:24:37 AM	44111
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	4/7/2019 3:24:37 AM	44111
Surr: Dibromofluoromethane	90.4	70-130	%Rec	1	4/7/2019 3:24:37 AM	44111
Surr: Toluene-d8	95.3	70-130	%Rec	1	4/7/2019 3:24:37 AM	44111

Hall Environmental Analysis Laboratory, Inc.

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

- Value above quantitation range Not Detected at the Reporting Limit
- RL Reporting Detection Limit

- Н Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit % Recovery outside of range due to dilution or matrix
- Sample container temperature is out of limit as specified at testcode
- S

- Е ND W

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Lateral 3A 2

Project:

Client Sample ID: CS-3

Collection Date: 4/3/2019 10:10:00 AM Received Date: 4/4/2019 8:14:00 AM

Lab ID: 1904250-003	Matrix: SOIL		Received Date	e: 4/4	4/2019 8:14:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	72	60	mg/Kg	20	4/5/2019 12:57:20 PM	44147
EPA METHOD 8015D MOD: GASOLI	INE RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	210	4.8	mg/Kg	1	4/6/2019 12:43:38 PM	44111
Surr: BFB	108	70-130	%Rec	1	4/6/2019 12:43:38 PM	44111
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst:	CLP
Diesel Range Organics (DRO)	230	10	mg/Kg	1	4/5/2019 10:13:47 AM	44127
Motor Oil Range Organics (MRO)	57	50	mg/Kg	1	4/5/2019 10:13:47 AM	44127
Surr: DNOP	104	70-130	%Rec	1	4/5/2019 10:13:47 AM	44127
EPA METHOD 8260B: VOLATILES S	SHORT LIST				Analyst:	RAA
Benzene	0.025	0.024	mg/Kg	1	4/7/2019 3:53:14 AM	44111
Toluene	1.1	0.048	mg/Kg	1	4/7/2019 3:53:14 AM	44111
Ethylbenzene	0.31	0.048	mg/Kg	1	4/7/2019 3:53:14 AM	44111
Xylenes, Total	3.8	0.095	mg/Kg	1	4/7/2019 3:53:14 AM	44111
Surr: 1,2-Dichloroethane-d4	89.0	70-130	%Rec	1	4/7/2019 3:53:14 AM	44111
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	4/7/2019 3:53:14 AM	44111
Surr: Dibromofluoromethane	92.6	70-130	%Rec	1	4/7/2019 3:53:14 AM	44111
Surr: Toluene-d8	92.9	70-130	%Rec	1	4/7/2019 3:53:14 AM	44111

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

Qualifiers:

Е

- Value above quantitation range ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

- Holding times for preparation or analysis exceeded Н PQL Practical Quanitative Limit
- s % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified at testcode

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Lateral 3A 2

Project:

Client Sample ID: CS-4

Collection Date: 4/3/2019 10:15:00 AM Received Date: 4/4/2019 8:14:00 AM

Lab ID: 1904250-004	Matrix: SOIL	I	Received Date	e:4/4	4/2019 8:14:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	230	60	mg/Kg	20	4/5/2019 1:09:44 PM	44147
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/7/2019 4:21:49 AM	44111
Surr: BFB	105	70-130	%Rec	1	4/7/2019 4:21:49 AM	44111
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/5/2019 10:37:42 AM	44127
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/5/2019 10:37:42 AM	44127
Surr: DNOP	106	70-130	%Rec	1	4/5/2019 10:37:42 AM	44127
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst:	RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 4:21:49 AM	44111
Toluene	ND	0.046	mg/Kg	1	4/7/2019 4:21:49 AM	44111
Ethylbenzene	ND	0.046	mg/Kg	1	4/7/2019 4:21:49 AM	44111
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 4:21:49 AM	44111
Surr: 1,2-Dichloroethane-d4	86.3	70-130	%Rec	1	4/7/2019 4:21:49 AM	44111
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	4/7/2019 4:21:49 AM	44111
Surr: Dibromofluoromethane	90.2	70-130	%Rec	1	4/7/2019 4:21:49 AM	44111
Surr: Toluene-d8	95.3	70-130	%Rec	1	4/7/2019 4:21:49 AM	44111

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

- EValue above quantitation rangeNDNot Detected at the Reporting Limit
- RL Reporting Detection Limit

- H Holding times for preparation or analysis exceeded PQL Practical Quanitative Limit
- S %
- W Sample container temperature is out of limit as specified at testcode
- % Recovery outside of range due to dilution or matrix

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Project: Lateral 3A 2

Client Sample ID: CS-5

Collection Date: 4/3/2019 10:20:00 AM **Deceived Dete:** 1/1/2010 8:14:00 AM

Lab ID: 1904250-005	Matrix: SOIL		Received Date	e:4/4	4/2019 8:14:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	4/5/2019 1:22:09 PM	44147
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 7:41:49 AM	44111
Surr: BFB	102	70-130	%Rec	1	4/7/2019 7:41:49 AM	44111
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/5/2019 11:01:39 AM	44127
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/5/2019 11:01:39 AM	44127
Surr: DNOP	102	70-130	%Rec	1	4/5/2019 11:01:39 AM	44127
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 7:41:49 AM	44111
Toluene	ND	0.047	mg/Kg	1	4/7/2019 7:41:49 AM	44111
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 7:41:49 AM	44111
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 7:41:49 AM	44111
Surr: 1,2-Dichloroethane-d4	85.6	70-130	%Rec	1	4/7/2019 7:41:49 AM	44111
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	4/7/2019 7:41:49 AM	44111
Surr: Dibromofluoromethane	90.1	70-130	%Rec	1	4/7/2019 7:41:49 AM	44111
Surr: Toluene-d8	95.8	70-130	%Rec	1	4/7/2019 7:41:49 AM	44111

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

Qualifiers:

- Е Value above quantitation range ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

- Holding times for preparation or analysis exceeded Н PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified at testcode
- S

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Lateral 3A 2

1904250-006

Project:

Lab ID:

Client Sample ID: CS-6

Collection Date: 4/3/2019 10:25:00 AM Received Date: 4/4/2019 8:14:00 AM

			100001.00 200	••••		
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	4/5/2019 1:34:33 PM	44147
EPA METHOD 8015D MOD: GASOLINE RANGE	<u>.</u>				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 8:10:23 AM	44111
Surr: BFB	103	70-130	%Rec	1	4/7/2019 8:10:23 AM	44111
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	41	9.1	mg/Kg	1	4/5/2019 11:25:38 AM	44127
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	4/5/2019 11:25:38 AM	44127
Surr: DNOP	122	70-130	%Rec	1	4/5/2019 11:25:38 AM	44127
EPA METHOD 8260B: VOLATILES SHORT LIST	г				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 8:10:23 AM	44111
Toluene	ND	0.048	mg/Kg	1	4/7/2019 8:10:23 AM	44111
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 8:10:23 AM	44111
Xylenes, Total	0.10	0.096	mg/Kg	1	4/7/2019 8:10:23 AM	44111
Surr: 1,2-Dichloroethane-d4	87.2	70-130	%Rec	1	4/7/2019 8:10:23 AM	44111
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	4/7/2019 8:10:23 AM	44111
Surr: Dibromofluoromethane	89.1	70-130	%Rec	1	4/7/2019 8:10:23 AM	44111
Surr: Toluene-d8	95.4	70-130	%Rec	1	4/7/2019 8:10:23 AM	44111

Matrix: SOIL

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

Qualifiers:

- EValue above quantitation rangeNDNot Detected at the Reporting Limit
- RL Reporting Detection Limit

- H Holding times for preparation or analysis exceeded PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID:CS-7 Collection Date: 4/3/2019 10:30:00 AM

Lab ID: 1904250-007	Matrix: SOIL		Receiv	ved Dat	e:4/4	4/2019 8:14:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	400	60		mg/Kg	20	4/5/2019 1:46:58 PM	44147
EPA METHOD 8015D MOD: GASOLI	NE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/7/2019 8:38:59 AM	44111
Surr: BFB	102	70-130		%Rec	1	4/7/2019 8:38:59 AM	44111
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/5/2019 11:49:36 AM	44127
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/5/2019 11:49:36 AM	44127
Surr: DNOP	143	70-130	S	%Rec	1	4/5/2019 11:49:36 AM	44127
EPA METHOD 8260B: VOLATILES S	HORT LIST					Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/7/2019 8:38:59 AM	44111
Toluene	ND	0.047		mg/Kg	1	4/7/2019 8:38:59 AM	44111
Ethylbenzene	ND	0.047		mg/Kg	1	4/7/2019 8:38:59 AM	44111
Xylenes, Total	ND	0.093		mg/Kg	1	4/7/2019 8:38:59 AM	44111
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%Rec	1	4/7/2019 8:38:59 AM	44111
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	4/7/2019 8:38:59 AM	44111
Surr: Dibromofluoromethane	93.0	70-130		%Rec	1	4/7/2019 8:38:59 AM	44111
Surr: Toluene-d8	94.3	70-130		%Rec	1	4/7/2019 8:38:59 AM	44111

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

Qualifiers:

CLIENT: ENSOLUM

Project: Lateral 3A 2

- Е Value above quantitation range ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

W

- Н Holding times for preparation or analysis exceeded PQL Practical Quanitative Limit

- Sample container temperature is out of limit as specified at testcode
- S % Recovery outside of range due to dilution or matrix
 - Page 7 of 18

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Lateral 3A 2

Project:

Client Sample ID: CS-8 Collection Date: 4/3/2019 10:35:00 AM

Lab ID: 1904250-008 Matrix: SOIL Received Date: 4/4/2019 8:14:00 AM Result **RL** Qual Units **DF** Date Analyzed Batch Analyses Analyst: MRA **EPA METHOD 300.0: ANIONS** 4/5/2019 1:59:22 PM Chloride 110 60 mg/Kg 20 44147 **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: RAA Gasoline Range Organics (GRO) ND 4.7 mg/Kg 1 4/7/2019 9:07:35 AM 44111 Surr: BFB 103 70-130 %Rec 1 4/7/2019 9:07:35 AM 44111 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: CLP **Diesel Range Organics (DRO)** ND 9.5 mg/Kg 4/5/2019 12:13:39 PM 44127 1 Motor Oil Range Organics (MRO) ND 44127 48 mg/Kg 1 4/5/2019 12:13:39 PM Surr: DNOP 103 %Rec 70-130 1 4/5/2019 12:13:39 PM 44127 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: RAA ND 4/7/2019 9:07:35 AM 44111 Benzene 0.023 mg/Kg 1 Toluene ND 0.047 mg/Kg 4/7/2019 9:07:35 AM 44111 1 Ethylbenzene ND 0.047 mg/Kg 4/7/2019 9:07:35 AM 44111 1 Xylenes, Total ND 0.093 mg/Kg 1 4/7/2019 9:07:35 AM 44111 Surr: 1,2-Dichloroethane-d4 88.1 70-130 %Rec 1 4/7/2019 9:07:35 AM 44111 Surr: 4-Bromofluorobenzene 102 70-130 %Rec 4/7/2019 9:07:35 AM 44111 1 Surr: Dibromofluoromethane 70-130 90.8 %Rec 1 4/7/2019 9:07:35 AM 44111 Surr: Toluene-d8 95.6 70-130 %Rec 1 4/7/2019 9:07:35 AM 44111

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

Oualifiers:

E

- Value above quantitation range ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- S
- W Sample container temperature is out of limit as specified at testcode
- н Holding times for preparation or analysis exceeded PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Lateral 3A 2

Project:

Client Sample ID: CS-9

Collection Date: 4/3/2019 10:40:00 AM Received Date: 4/4/2019 8:14:00 AM

Lab ID: 1904250-009	Matrix: SOIL	R	Received Date	e:4/4	4/2019 8:14:00 AM	
Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	ND	60	mg/Kg	20	4/5/2019 2:11:46 PM	44147
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 9:36:15 AM	44111
Surr: BFB	102	70-130	%Rec	1	4/7/2019 9:36:15 AM	44111
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst:	CLP
Diesel Range Organics (DRO)	9.6	9.2	mg/Kg	1	4/5/2019 12:37:48 PM	44127
Motor Oil Range Organics (MRO)	150	46	mg/Kg	1	4/5/2019 12:37:48 PM	44127
Surr: DNOP	128	70-130	%Rec	1	4/5/2019 12:37:48 PM	44127
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst:	RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 9:36:15 AM	44111
Toluene	ND	0.048	mg/Kg	1	4/7/2019 9:36:15 AM	44111
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 9:36:15 AM	44111
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 9:36:15 AM	44111
Surr: 1,2-Dichloroethane-d4	85.5	70-130	%Rec	1	4/7/2019 9:36:15 AM	44111
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	4/7/2019 9:36:15 AM	44111
Surr: Dibromofluoromethane	89.1	70-130	%Rec	1	4/7/2019 9:36:15 AM	44111
Surr: Toluene-d8	95.5	70-130	%Rec	1	4/7/2019 9:36:15 AM	44111

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

- EValue above quantitation rangeNDNot Detected at the Reporting Limit
- RL Reporting Detection Limit

- H
 Holding times for preparation or analysis exceeded

 PQL
 Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified at testcode

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Project: Lateral 3A 2

Client Sample ID: CS-10 Collection Date: 4/3/2019 10:45:00 AM **Deceived Dete:** 1/1/2010 8:14:00 AM

Lab ID: 1904250-010	Matrix: SOIL]	Received Date	e: 4/4	4/2019 8:14:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	ND	60	mg/Kg	20	4/5/2019 2:24:11 PM	44147
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 10:04:53 AM	44111
Surr: BFB	102	70-130	%Rec	1	4/7/2019 10:04:53 AM	44111
EPA METHOD 8015M/D: DIESEL R/	ANGE ORGANICS				Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/5/2019 3:30:08 PM	44127
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/5/2019 3:30:08 PM	44127
Surr: DNOP	106	70-130	%Rec	1	4/5/2019 3:30:08 PM	44127
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst:	RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 10:04:53 AM	44111
Toluene	ND	0.048	mg/Kg	1	4/7/2019 10:04:53 AM	44111
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 10:04:53 AM	44111
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 10:04:53 AM	44111
Surr: 1,2-Dichloroethane-d4	85.4	70-130	%Rec	1	4/7/2019 10:04:53 AM	44111
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	4/7/2019 10:04:53 AM	44111
Surr: Dibromofluoromethane	89.1	70-130	%Rec	1	4/7/2019 10:04:53 AM	44111
Surr: Toluene-d8	95.1	70-130	%Rec	1	4/7/2019 10:04:53 AM	44111

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

- Е Value above quantitation range ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- s
- Holding times for preparation or analysis exceeded Н PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Project: Lateral 3A 2

Client Sample ID: CS-11 Collection Date: 4/3/2019 10:50:00 AM

Lab ID: 1904250-011	Matrix: SOIL		Received Date: 4/4/2019 8:14:00 AM					
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	MRA		
Chloride	ND	60	mg/Kg	20	4/5/2019 3:01:25 PM	44147		
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst	RAA		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 10:33:33 AM	44111		
Surr: BFB	103	70-130	%Rec	1	4/7/2019 10:33:33 AM	44111		
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	CLP		
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/5/2019 1:52:01 PM	44127		
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/5/2019 1:52:01 PM	44127		
Surr: DNOP	121	70-130	%Rec	1	4/5/2019 1:52:01 PM	44127		
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	RAA		
Benzene	ND	0.024	mg/Kg	1	4/7/2019 10:33:33 AM	44111		
Toluene	ND	0.048	mg/Kg	1	4/7/2019 10:33:33 AM	44111		
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 10:33:33 AM	44111		
Xylenes, Total	ND	0.097	mg/Kg	1	4/7/2019 10:33:33 AM	44111		
Surr: 1,2-Dichloroethane-d4	85.5	70-130	%Rec	1	4/7/2019 10:33:33 AM	44111		
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	4/7/2019 10:33:33 AM	44111		
Surr: Dibromofluoromethane	89.3	70-130	%Rec	1	4/7/2019 10:33:33 AM	44111		
Surr: Toluene-d8	95.5	70-130	%Rec	1	4/7/2019 10:33:33 AM	44111		

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

Qualifiers:

- EValue above quantitation rangeNDNot Detected at the Reporting Limit
- RL Reporting Detection Limit

- H
 Holding times for preparation or analysis exceeded

 PQL
 Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Lateral 3A 2

Project:

Date Reported: 4/9/2019 **Client Sample ID:**CS-12

Collection Date: 4/3/2019 11:00:00 AM Received Date: 4/4/2019 8:14:00 AM

Lab ID: 1904250-012	Matrix: SOIL		Received Date: 4/4/2019 8:14:00 AM								
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS						Analyst:	MRA				
Chloride	ND	60		mg/Kg	20	4/5/2019 3:13:50 PM	44147				
EPA METHOD 8015D MOD: GASOL	INE RANGE					Analyst:	RAA				
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/7/2019 11:02:14 AM	44111				
Surr: BFB	102	70-130		%Rec	1	4/7/2019 11:02:14 AM	44111				
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS					Analyst:	CLP				
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/5/2019 2:17:51 PM	44127				
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/5/2019 2:17:51 PM	44127				
Surr: DNOP	137	70-130	S	%Rec	1	4/5/2019 2:17:51 PM	44127				
EPA METHOD 8260B: VOLATILES	SHORT LIST					Analyst:	RAA				
Benzene	ND	0.024		mg/Kg	1	4/7/2019 11:02:14 AM	44111				
Toluene	ND	0.048		mg/Kg	1	4/7/2019 11:02:14 AM	44111				
Ethylbenzene	ND	0.048		mg/Kg	1	4/7/2019 11:02:14 AM	44111				
Xylenes, Total	ND	0.096		mg/Kg	1	4/7/2019 11:02:14 AM	44111				
Surr: 1,2-Dichloroethane-d4	86.4	70-130		%Rec	1	4/7/2019 11:02:14 AM	44111				
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/7/2019 11:02:14 AM	44111				
Surr: Dibromofluoromethane	89.8	70-130		%Rec	1	4/7/2019 11:02:14 AM	44111				
Surr: Toluene-d8	94.9	70-130		%Rec	1	4/7/2019 11:02:14 AM	44111				

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

Qualifiers:

Е

- Value above quantitation range ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

- Holding times for preparation or analysis exceeded Н PQL Practical Quanitative Limit
- s

W Sample container temperature is out of limit as specified at testcode % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory, Inc.	

ENSOLUM

WO#: 1904250 09-Apr-19

Project: Latera	ıl 3A 2			
Sample ID: MB-44147	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 44147	RunNo: 58920		
Prep Date: 4/5/2019	Analysis Date: 4/5/2019	SeqNo: 1982048	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID: LCS-44147	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 44147	RunNo: 58920		
Prep Date: 4/5/2019	Analysis Date: 4/5/2019	SeqNo: 1982049	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 92.7 90	110	

Qualifiers:

Client:

- Е Value above quantitation range
- ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

- W Sample container temperature is out of limit as specified at testcode
- Holding times for preparation or analysis exceeded Practical Quanitative Limit Н
- PQL
 - % Recovery outside of range due to dilution or matrix S

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

Client:ENSOLUProject:Lateral 3.					
Sample ID: MB-44127	SampType: MBLK	Tes	stCode: FPA Method	8015M/D: Diesel Range	e Organics
Client ID: PBS	Batch ID: 44127		RunNo: 58929		oorganioo
Prep Date: 4/4/2019	Analysis Date: 4/5/2019		SeqNo: 1981904	Units: mg/Kg	
Analyte		value SPK Ref Val		HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	ND 10		/inteo Eoweinin		th Delinit Guu
Motor Oil Range Organics (MRO)	ND 50				
Surr: DNOP	10 1	0.00	101 70	130	
Sample ID: LCS-44127	SampType: LCS	Tes	stCode: EPA Method	8015M/D: Diesel Range	e Organics
Client ID: LCSS	Batch ID: 44127	I	RunNo: 58929		
Prep Date: 4/4/2019	Analysis Date: 4/5/2019		SeqNo: 1981905	Units: mg/Kg	
Analyte	Result PQL SPK v	alue SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	47 10 5	0.00 0	93.6 63.9	124	
Surr: DNOP	4.8 5	5.000	95.3 70	130	
Sample ID: 1904250-001AMS	SampType: MS	Tes	stCode: EPA Method	8015M/D: Diesel Range	e Organics
Client ID: CS-1	Batch ID: 44127	l	RunNo: 58929		
Prep Date: 4/4/2019	Analysis Date: 4/5/2019		SeqNo: 1983929	Units: mg/Kg	
Analyte	Result PQL SPK v	alue SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	57 9.4 4	6.77 2.614	117 53.5	126	
Surr: DNOP	5.9 4	.677	126 70	130	
Sample ID: 1904250-001AMS	SampType: MSD	Tes	stCode: EPA Method	8015M/D: Diesel Range	e Organics
Client ID: CS-1	Batch ID: 44127	I	RunNo: 58929		
Prep Date: 4/4/2019	Analysis Date: 4/5/2019		SeqNo: 1983930	Units: mg/Kg	
Analyte	Result PQL SPK v	alue SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	56 9.8 4	8.83 2.614	109 53.5	126 2.95	21.7
Surr: DNOP	5.6 4	.883	114 70	130 0	0
Sample ID: MB-44133	SampType: MBLK	Tes	stCode: EPA Method	8015M/D: Diesel Range	e Organics
Client ID: PBS	Batch ID: 44133	l	RunNo: 58929		
Prep Date: 4/4/2019	Analysis Date: 4/5/2019		SeqNo: 1983932	Units: %Rec	
Analyte	Result PQL SPK v	value SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit Qual
Surr: DNOP	13 1	0.00	130 70	130	S
Sample ID: LCS-44133	SampType: LCS	Tes	stCode: EPA Method	8015M/D: Diesel Range	e Organics
Client ID: LCSS	Batch ID: 44133		RunNo: 58929		J
Prep Date: 4/4/2019	Analysis Date: 4/5/2019		SeqNo: 1983933	Units: %Rec	
Analyte		value SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit Qual
,				,	

Qualifiers:

Value above quantitation range Not Detected at the Reporting Limit Е

- Н
- PQL

- ND RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode

S

Holding times for preparation or analysis exceeded Practical Quanitative Limit % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory, Inc	

WO#: 1904250 09-Apr-19

Client: Project:	ENSOI Lateral	-									
Sample ID: LC	S-44133	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LC	lient ID: LCSS Batch ID: 44133		F	RunNo: 5	8929						
Prep Date: 4	/4/2019	Analysis E	Date: 4	/5/2019	S	SeqNo: 1	983933	Units: %Re	C		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		4.7		5.000		94.6	70	130			

Qualifiers:

- Е
- Value above quantitation range Not Detected at the Reporting Limit ND

RL Reporting Detection Limit

- W Sample container temperature is out of limit as specified at testcode
- Н
- PQL
- Holding times for preparation or analysis exceeded Practical Quanitative Limit % Recovery outside of range due to dilution or matrix S

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory, Inc.	

WO#:	1904250

Client: ENSOLUM Project: Lateral 3A 2 Sample ID: Ics-44098 SampType: LCS TestCode: EPA Method 8260B: Volatiles Short List Client ID: LCSS Batch ID: 44098 RunNo: 58934 Prep Date: 4/4/2019 Analysis Date: 4/5/2019 SeqNo: 1982755 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Surr: 1,2-Dichloroethane-d4 88.2 70 0.44 0.5000 130 Surr: 4-Bromofluorobenzene 0.51 0.5000 102 70 130 Surr: Dibromofluoromethane 88.1 70 0.44 0.5000 130 Surr: Toluene-d8 0.47 0.5000 95.0 70 130 Sample ID: mb-44098 TestCode: EPA Method 8260B: Volatiles Short List SampType: MBLK Client ID: PBS Batch ID: 44098 RunNo: 58934 Prep Date: 4/4/2019 Analysis Date: 4/5/2019 SeqNo: 1982756 Units: %Rec SPK value SPK Ref Val %REC %RPD RPDLimit Analyte Result PQL LowLimit HighLimit Qual Surr: 1,2-Dichloroethane-d4 0.45 0.5000 90.5 70 130 130 0.52 0.5000 103 70 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane 0.45 0.5000 89.8 70 130 Surr: Toluene-d8 0.46 0.5000 93.0 70 130 Sample ID: Ics-44111 SampType: LCS TestCode: EPA Method 8260B: Volatiles Short List Client ID: LCSS Batch ID: 44111 RunNo: 58962 Prep Date: 4/4/2019 Analysis Date: 4/6/2019 SeqNo: 1983547 Units: mg/Kg %REC %RPD RPDLimit Analyte Result PQL SPK value SPK Ref Val LowLimit HighLimit Qual Benzene 0.73 0.025 1.000 0 73.1 70 130 Toluene 0.91 0.050 1.000 0 91.4 70 130 Ethylbenzene 0.92 0.050 1.000 0 91.8 70 130 Xylenes, Total 2.8 0.10 3.000 0 94.1 70 130 Surr: 1,2-Dichloroethane-d4 0.5000 86.5 70 0.43 130 Surr: 4-Bromofluorobenzene 0.5000 103 0.52 70 130 Surr: Dibromofluoromethane 0.5000 89.0 70 0.44 130 Surr: Toluene-d8 0.47 0.5000 94.0 70 130 Sample ID: mb-44111 SampType: MBLK TestCode: EPA Method 8260B: Volatiles Short List Client ID: PBS Batch ID: 44111 RunNo: 58962 Analysis Date: 4/6/2019 Prep Date: 4/4/2019 SeqNo: 1983548 Units: mg/Kg Analyte PQL SPK value SPK Ref Val %REC LowLimit %RPD RPDLimit Result HighLimit Qual Benzene ND 0.025 Toluene ND 0.050 ND 0.050 Ethylbenzene ND 0.10 Xylenes, Total 0.43 0.5000 85.3 70 130 Surr: 1,2-Dichloroethane-d4 0.52 0.5000 104 Surr: 4-Bromofluorobenzene 70 130

Qualifiers:

E Value above quantitation range ND Not Detected at the Reporting Limit н Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

RL Reporting Detection Limit

Sample container temperature is out of limit as specified at testcode W

% Recovery outside of range due to dilution or matrix

Page 16 of 18

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

	ENSOLUM Lateral 3A 2									
Sample ID: mb-4411	1 Samp	Туре: М	BLK	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: PBS	Bate	ch ID: 44	1111	F	RunNo: 5	8962				
Prep Date: 4/4/201	Analysis	Date: 4	/6/2019	S	SeqNo: 1	983548	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluorometh	ane 0.43		0.5000		86.9	70	130			
Surr: Toluene-d8	0.47		0.5000		93.3	70	130			

- Е
- Value above quantitation range Not Detected at the Reporting Limit ND
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- Н
- PQL
- Holding times for preparation or analysis exceeded Practical Quanitative Limit % Recovery outside of range due to dilution or matrix S

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: **1904250**

Client: ENSOL Project: Lateral	-								
U			T			0045D Made	0 1'		
Sample ID: Ics-44098	SampType: L					8015D Mod: (Gasoline	Range	
Client ID: LCSS	Batch ID: 44	1098	R	lunNo: 58	934				
Prep Date: 4/4/2019	Analysis Date: 4	/5/2019	S	eqNo: 19	82789	Units: %Rec	;		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	500	500.0		100	70	130			
Sample ID: Ics-44111	SampType: L	cs	Tes	tCode: EP	A Method	8015D Mod: (Gasoline	Range	
Client ID: LCSS	Batch ID: 44	1111	R	unNo: 58	934				
Prep Date: 4/4/2019	Analysis Date: 4	/6/2019	S	eqNo: 19	82790	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21 5.0	25.00	0	82.8	70	130			
Surr: BFB	510	500.0		103	70	130			
Sample ID: mb-44111	SampType: M	BLK	Tes	tCode: EP	A Method	8015D Mod: (Gasoline	Range	
Client ID: PBS	Batch ID: 44	1111	R	unNo: 58	934				
Prep Date: 4/4/2019	Analysis Date: 4	/6/2019	S	eqNo: 19	82791	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	520	500.0		105	70	130			
Sample ID: mb-44098	SampType: M	BLK	Tes	tCode: EP	A Method	8015D Mod: (Gasoline	Range	
Client ID: PBS	Batch ID: 44	1098	R	unNo: 58	934				
Prep Date: 4/4/2019	Analysis Date: 4	/5/2019	S	eqNo: 19	82792	Units: %Rec	:		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	500	500.0		99.8	70	130			

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
 - S % Recovery outside of range due to dilution or matrix

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Alb TEL: 505-345-397 Website: www.ha	4901 H nuquerque, 5 FAX: 505	awkins NE NM 87109 -345-4107	San	nple Log-In Ch	neck List
Client Name: ENSOLUM AZTEC	Wark Order Number	190425	0		RcptNo:	1
Received By: Yazmine Garduno Completed By: Erin Melendrez	4/4/2019 8:14:00 AM 4/4/2019 9:13:05 AM		April 1	nin léfndut UA	_	
Reviewed By: AB LB: YG 414116	4/4/11					
Chain of Custody						
1. Is Chain of Custody complete?		Yes 🔽] N	0	Not Present	
2. How was the sample delivered?		Courier				
Log In 3. Was an attempt made to cool the sample:	\$?	Yes 🔽	N	•		
4. Were all samples received at a temperatu	re of >0" C to 6.0"C	Yes 🗹	N	•		
5. Sample(s) in proper container(s)?		Yes 🗹	N	•		
Sufficient sample volume for indicated test	t(s)?	Yes 🗹	No			
7. Are samples (except VOA and ONG) prop	erly preserved?	Yes 🔽	No			~
8. Was preservative added to bottles?		Yes 🗌	No	•	NA 🗌	/
9. VOA vials have zero headspace?		Yes 🗌	No		No VCA Vials 🗹	/
0. Were any sample containers received bro	ken?	Yes 🗆	N	• 🗹	# of preserved /	/
1. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🔽	No	b []	for pH:	12 unless noted)
2. Are matrices correctly identified on Chain a	of Custody?	Yes 🗹	No		Adjusted?	
3, Is it clear what analyses were requested?		Yes 🗹	No	• 🗆		A
 Were all holding times able to be met? (If no, notify customer for authorization.) 		Yes 🗹	No		Checked by:	6 4/4/1
pecial Handling (if applicable)					/	
5. Was client notified of all discrepancies wit	h this order?	Yes 🗌	N	o 🗆	NA 🔽	
Person Notified:	Date:	eMail	Phone [Fax	In Person	
Regarding:	* 10.					
16. Additional remarks:						
17. <u>Cooler Information</u> Cooler No Temp °C Condition	Saal Intert Coal No.	Coal Data	Pierre	10.	r.	

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			
2	3.1	Good	Yes			

	ENVIRONMENTAL VSTS LABORATORY		109						(1	011		Cryteride enternation enternat	~	×	×	×	×	X	×	X	×	X		X		
	N D D	mo	Albuquerque, NM 87109	505-345-4107	ž					(∀)		m92) 0728		Ĺ											10	
	A A	www.hallenvironmental.com	tue, N	5-345	Analysis Request		sac	117	2000			00V) 8081 Pestic	_		-		-	_	_	_					3355	
	Z S	onme	duero	ax 50	is Re				_	_	_	D, H) anoinA	-	_	-			-	-	-				-		
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1		v.hall	Ļ	975	A		(S	MIS	S 02	82	0 0	rɛ8) a'HA9														
	HALL ENVI ANALYSTS	MM	kins N	45-3					10.000			EDB (Weth													PW-TOM LOND	
			4901 Hawkins NE -	Tel. 505-345-3975		100	115/ 7	01	00.00			TPH (Metho				Generation						_			RA	
			4901	Tel.		2016.0						TM + X3T8 82108 H9T	Y	Y	¥	Y	×	*	×	Y	X	7	7	7	irks:	
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	n			d		meur			5	QN	16 1	HE/	100-	-00-	-00-	-DOC	-00	-000	-00-	-00	3	-DIC	HQ-	210-	Date (13)19	illulli
Time:	Kush	24.2	6	05A1226 OSA		ger: Ksummur	Y		SDEEChillu	A Yes I	mperature: 2-3-	Preservative Type	1007	Coul	Ccoi	ceol -	Ceol .	c 001 -	1000	1000	Cool	C001 -	1000	1007	Whet	auhier L
Turn-Around Time:	Standard	Project Name:		Project #: O-		Project Manager:			Sampler: 1	On Ice:	Sample Temp	Container Type and #	(1)462 Jar	Wasar	0)402 Jar	[] Yoz Jar	(1) You Jar	W) you Jar	WYorJar	(1) Yez Jar	Myez Jar	1140 Jar	0) you Jar	WHer Sar	Regeived by:	WULL O
Chain-of-Custody Record	رر . ر		Mailing Address: 606 5 Rio Counte ant 4	1 01		email or Fax#: KSUNNINEVS @ Provlum, COM	•	Level 4 (Full Validation)				Sample Request ID	1-52	C5-2	CS-3	C5-4	CS-5	cs- 6	CS-7	CS - 8	CS-9	CS-10	11-SJ	21-50	AN CA	the Walles
of-Cu	num, L		s aloaj	UINT & TUID		Sum				□ Other		Matrix	5	S	S	S	S	S	5	S	~	S	S	S	Relinquished by	Muntuur
nain-c	Ensolumitic		Address:	Azter NW	-	Fax#: k	ackage:	ard	ation	۵.	Type)	Time	1000	1005	0101	1015	1020	1025	1030	1035	0401	SHOU	1050	0011	5	1810
ប	Client:		Mailing A	Arts	Phone #:	email or	QA/QC Package:	Standard	Accreditation	O NELAP	DEDD (Type)	Date	413/19	4319		43/191	4/3/19 1020	u13/19	4319	413119	43/19/1640	415/19 1045	413/19		5	ul lin



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

April 26, 2019

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

OrderNo.: 1904B43

RE: Lateral 3A-2

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 4/24/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 4/26/2019

						1	
CLIENT:	ENSOLUM		Cl	ient Sample II	D: CS	5-13	
Project:	Lateral 3A-2		(Collection Dat	e: 4/2	23/2019 1:05:00 PM	
Lab ID:	1904B43-001	Matrix: SOIL		Received Dat	e: 4/2	24/2019 8:20:00 AM	
Analyses		Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analyst	smb
Chloride		ND	60	mg/Kg	20	4/24/2019 11:03:24 AM	44510
EPA MET	HOD 8015M/D: DIESEL RAN	IGE ORGANICS				Analyst	JME
Diesel R	ange Organics (DRO)	63	9.5	mg/Kg	1	4/24/2019 10:41:13 AM	44501
Motor Oi	l Range Organics (MRO)	ND	48	mg/Kg	1	4/24/2019 10:41:13 AM	44501
Surr: [DNOP	103	70-130	%Rec	1	4/24/2019 10:41:13 AM	44501
EPA MET	HOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline	Range Organics (GRO)	ND	18	mg/Kg	5	4/24/2019 8:55:57 AM	G59391
Surr: E	3FB	110	73.8-119	%Rec	5	4/24/2019 8:55:57 AM	G59391

Hall Environmental Analysis Laboratory, Inc.

Surr: BFB	110	73.8-119	%Rec	5	4/24/2019 8:55:57 AM	G59391
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.091	mg/Kg	5	4/24/2019 8:55:57 AM	B59391
Toluene	ND	0.18	mg/Kg	5	4/24/2019 8:55:57 AM	B59391
Ethylbenzene	ND	0.18	mg/Kg	5	4/24/2019 8:55:57 AM	B59391
Xylenes, Total	ND	0.36	mg/Kg	5	4/24/2019 8:55:57 AM	B59391
Surr: 4-Bromofluorobenzene	92.4	80-120	%Rec	5	4/24/2019 8:55:57 AM	B59391

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 13

%Rec 5 4/24/2019 9:19:21 AM B59391

Date Reported: 4/26/2019

v	•				Date Reported. 4/20/20	
CLIENT: ENSOLUM		Cl	ient Sample II	D: CS	5-14	
Project: Lateral 3A-2		(Collection Dat	e: 4/2	23/2019 1:10:00 PM	
Lab ID: 1904B43-002	Matrix: SOIL		24/2019 8:20:00 AM			
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	ND	60	mg/Kg	20	4/24/2019 11:15:49 AM	44510
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/24/2019 11:05:14 AM	44501
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/24/2019 11:05:14 AM	44501
Surr: DNOP	105	70-130	%Rec	1	4/24/2019 11:05:14 AM	44501
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	19	mg/Kg	5	4/24/2019 9:19:21 AM	G59391
Surr: BFB	89.5	73.8-119	%Rec	5	4/24/2019 9:19:21 AM	G59391
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.095	mg/Kg	5	4/24/2019 9:19:21 AM	B59391
Toluene	ND	0.19	mg/Kg	5	4/24/2019 9:19:21 AM	B59391
Ethylbenzene	ND	0.19	mg/Kg	5	4/24/2019 9:19:21 AM	B59397
Xylenes, Total	ND	0.38	mg/Kg	5	4/24/2019 9:19:21 AM	B59391

88.2

80-120

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

Surr: 4-Bromofluorobenzene

% Recovery outside of range due to dilution or matrix S

Hall Environmental Analysis Laboratory, Inc.

- 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 13

Date Reported: 4/26/2019

Batch

Analyses		Result	RL Qual Units	DF Date Analyzed
Lab ID:	1904B43-003	Matrix: SOIL	Received Dat	e: 4/24/2019 8:20:00 AM
Project:	Lateral 3A-2		Collection Dat	e: 4/23/2019 1:15:00 PM
CLIENT:	ENSOLUM		Client Sample I	D: CS-15

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 300.0: ANIONS					Analyst:	smb
Chloride	ND	60	mg/Kg	20	4/24/2019 11:28:14 AM	44510
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst:	JME
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/24/2019 10:18:45 AM	44501
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/24/2019 10:18:45 AM	44501
Surr: DNOP	98.3	70-130	%Rec	1	4/24/2019 10:18:45 AM	44501
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	16	mg/Kg	5	4/24/2019 9:42:55 AM	G59391
Surr: BFB	86.8	73.8-119	%Rec	5	4/24/2019 9:42:55 AM	G59391
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.079	mg/Kg	5	4/24/2019 9:42:55 AM	B59391
Toluene	ND	0.16	mg/Kg	5	4/24/2019 9:42:55 AM	B59391
Ethylbenzene	ND	0.16	mg/Kg	5	4/24/2019 9:42:55 AM	B59391
Xylenes, Total	ND	0.32	mg/Kg	5	4/24/2019 9:42:55 AM	B59391
Surr: 4-Bromofluorobenzene	85.9	80-120	%Rec	5	4/24/2019 9:42:55 AM	B59391

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 3 of 13

Date Reported: 4/26/2019

4/24/2019 10:06:35 AM B59391

	0 /				Dute Reported. 4/20/20	.,
CLIENT: ENSOLUM		Cl	ient Sample II	D: CS	5-16	
Project: Lateral 3A-2		(Collection Dat	e: 4/2	23/2019 1:20:00 PM	
Lab ID: 1904B43-004	Matrix: SOIL		Received Dat	e: 4/2	24/2019 8:20:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	ND	60	mg/Kg	20	4/24/2019 11:40:38 AM	44510
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/24/2019 10:42:59 AM	44501
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/24/2019 10:42:59 AM	44501
Surr: DNOP	93.6	70-130	%Rec	1	4/24/2019 10:42:59 AM	44501
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.7	mg/Kg	1	4/24/2019 10:06:35 AM	G59391
Surr: BFB	88.1	73.8-119	%Rec	1	4/24/2019 10:06:35 AM	G5939 ²
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.018	mg/Kg	1	4/24/2019 10:06:35 AM	B59391
Toluene	ND	0.037	mg/Kg	1	4/24/2019 10:06:35 AM	B59391
Ethylbenzene	ND	0.037	mg/Kg	1	4/24/2019 10:06:35 AM	B59397
Xylenes, Total	ND	0.073	mg/Kg	1	4/24/2019 10:06:35 AM	B59391

86.8

80-120

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

Surr: 4-Bromofluorobenzene

S % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range

%Rec 1

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

Page 4 of 13

Date Reported: 4/26/2019

4/24/2019 10:30:10 AM B59391

4/24/2019 10:30:10 AM B59391

4/24/2019 10:30:10 AM B59391

4/24/2019 10:30:10 AM B59391

•	e ,				1	
CLIENT: ENSOLUM		Cli	ient Sample II	D:CS	5-17	
Project: Lateral 3A-2		(Collection Dat	e: 4/2	23/2019 1:25:00 PM	
Lab ID: 1904B43-005	Matrix: SOIL		Received Dat	e: 4/2	24/2019 8:20:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: smb
Chloride	ND	60	mg/Kg	20	4/24/2019 11:53:03 AM	/ 44510
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS				Analys	t: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/24/2019 11:07:15 AM	44501
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/24/2019 11:07:15 AM	/ 44501
Surr: DNOP	97.8	70-130	%Rec	1	4/24/2019 11:07:15 AN	44501
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	4/24/2019 10:30:10 AM	/ G59391
Surr: BFB	94.3	73.8-119	%Rec	1	4/24/2019 10:30:10 AN	A G59391
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.017	mg/Kg	1	4/24/2019 10:30:10 AN	A B59391

ND

ND

ND

94.2

0.035

0.035

0.070

80-120

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers:

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

- * 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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Date Reported: 4/26/2019

4/24/2019 10:53:37 AM B59391

v					Dute Reported. 4/20/20	1)
CLIENT: ENSOLUM		Cl	ient Sample II	D: CS	5-18	
Project: Lateral 3A-2		(Collection Dat	e: 4/2	23/2019 1:30:00 PM	
Lab ID: 1904B43-006	Matrix: SOIL		Received Dat	e: 4/2	24/2019 8:20:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	ND	59	mg/Kg	20	4/24/2019 12:05:28 PM	44510
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/24/2019 11:31:31 AM	44501
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/24/2019 11:31:31 AM	44501
Surr: DNOP	100	70-130	%Rec	1	4/24/2019 11:31:31 AM	44501
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	4/24/2019 10:53:37 AM	G5939 ²
Surr: BFB	89.7	73.8-119	%Rec	1	4/24/2019 10:53:37 AM	G5939′
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.018	mg/Kg	1	4/24/2019 10:53:37 AM	B59391
Toluene	ND	0.035	mg/Kg	1	4/24/2019 10:53:37 AM	B59391
Ethylbenzene	ND	0.035	mg/Kg	1	4/24/2019 10:53:37 AM	B5939 ²
Xylenes, Total	ND	0.071	mg/Kg	1	4/24/2019 10:53:37 AM	B59391

88.5

80-120

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

Surr: 4-Bromofluorobenzene

S % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

- B Analyte detected in the associated Method Blank
- E Value above quantitation range

%Rec 1

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

Page 6 of 13

Date Reported: 4/26/2019

4/24/2019 11:17:10 AM B59391

4/24/2019 11:17:10 AM B59391

4/24/2019 11:17:10 AM B59391

······································					Date Reported. 4/20/20	17						
CLIENT: ENSOLUM		Client Sample ID: CS-19										
Project: Lateral 3A-2		(Collection Dat	e: 4/2	23/2019 1:35:00 PM							
Lab ID: 1904B43-007	24/2019 8:20:00 AM											
Analyses	Result	RL	RL Qual Units		DF Date Analyzed							
EPA METHOD 300.0: ANIONS					Analyst	: smb						
Chloride	ND	59	mg/Kg	20	4/24/2019 12:17:52 PM	44510						
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS				Analyst	: JME						
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/24/2019 11:55:56 AM	44501						
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/24/2019 11:55:56 AM	44501						
Surr: DNOP	101	70-130	%Rec	1	4/24/2019 11:55:56 AM	44501						
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	: NSB						
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	4/24/2019 11:17:10 AM	G5939 ⁻						
Surr: BFB	86.8	73.8-119	%Rec	1	4/24/2019 11:17:10 AM	G5939 ⁻						
EPA METHOD 8021B: VOLATILES					Analyst	: NSB						
Benzene	ND	0.019	mg/Kg	1	4/24/2019 11:17:10 AM	B5939 ⁻						
Toluene	ND	0.038	mg/Kg	1	4/24/2019 11:17:10 AM	B59392						

ND

ND

86.6

0.038

0.075

80-120

mg/Kg

mg/Kg

%Rec

1

1

1

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

Qualifiers:

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

- * 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

Hall Environmental Analysis Laboratory, Inc.

- 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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Date Reported: 4/26/2019

Analyst: NSB

Analyst: NSB

4/24/2019 11:40:54 AM G59391

4/24/2019 11:40:54 AM G59391

4/24/2019 11:40:54 AM B59391

4/24/2019 11:40:54 AM B59391 4/24/2019 11:40:54 AM B59391

4/24/2019 11:40:54 AM B59391

4/24/2019 11:40:54 AM B59391

		v	• •				Bute Reported. 4/20/20	.,			
CLIENT:	ENSOLUM			Cl	ient Sample]	D:CS	5-20				
Project:	Lateral 3A-2		Collection Date: 4/23/2019 1:40:00 PM								
Lab ID:	1904B43-008		Matrix: SOIL Received Date: 4/24/2019 8:20:00 AM								
Analyses			Result	RL	Qual Units	DF	Date Analyzed	Batch			
EPA ME	THOD 300.0: ANION	6					Analyst	smb			
Chloride			ND	60	mg/Kg	20	4/24/2019 12:30:17 PM	44510			
EPA ME	THOD 8015M/D: DIE	SEL RANGE	ORGANICS				Analyst	JME			
Diesel R	ange Organics (DRO)		ND	10	mg/Kg	1	4/24/2019 11:29:19 AM	44501			
Motor O	il Range Organics (MRC))	ND	50	mg/Kg	1	4/24/2019 11:29:19 AM	44501			
Surr:	DNOP		107	70-130	%Rec	1	4/24/2019 11:29:19 AM	44501			

ND

89.0

ND

ND

ND

ND

89.1

3.5

73.8-119

0.018

0.035

0.035

0.070

80-120

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

1

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.

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904B43** 26-Apr-19

	ENSOLUM Lateral 3A-2											
Sample ID: MB-445	10 Samp	SampType: MBLK			tCode: EP							
Client ID: PBS	Bate	Batch ID: 44510			RunNo: 59	384						
Prep Date: 4/24/20	019 Analysis	Analysis Date: 4/24/2019			SeqNo: 2001543			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Chloride	ND	1.5										
Sample ID: LCS-44	510 Samp	Type: LC	s	Tes	tCode: EP							
Client ID: LCSS	Bato	Batch ID: 44510			RunNo: 59	384						
Prep Date: 4/24/20	019 Analysis	Analysis Date: 4/24/2019			SeqNo: 2001544			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Chloride	14	1.5	15.00	0	94.0	90	110					

Qualifiers:

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

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

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904B43** 26-Apr-19

Client: Project:	ENSOLUM Lateral 3A-2											
Sample ID: MB-44	501 Samp	Туре: М	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics			
Client ID: PBS	Bate	Batch ID: 44501			RunNo: 5	9378						
Prep Date: 4/24/2	2019 Analysis	Date: 4/	24/2019	S	SeqNo: 2	000142	Units: mg/K	٢g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics	DRO) ND	10										
Motor Oil Range Organi		50										
Surr: DNOP	9.9		10.00		99.1	70	130					
Sample ID: LCS-4	1501 Samp	Type: LC	s	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics			
Client ID: LCSS	Bate	Batch ID: 44501			RunNo: 5	9378						
Prep Date: 4/24/2	2019 Analysis	Analysis Date: 4/24/2019			SeqNo: 2	000143	Units: mg/K	٤g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics	DRO) 46	10	50.00	0	91.3	63.9	124					
Surr: DNOP	4.4		5.000		87.5	70	130					
Sample ID: 1904B43-001AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics												
Client ID: CS-13	Bate	Batch ID: 44501			RunNo: 59379							
Prep Date: 4/24/2	2019 Analysis	Analysis Date: 4/24/2019			SeqNo: 2000419			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics	DRO) 82	9.2	45.83	62.69	42.1	53.5	126			S		
Surr: DNOP	4.1		4.583		88.6	70	130					
Sample ID: 1904B	43-001AMSD Samp	Туре: М	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics			
Client ID: CS-13	Bate	ch ID: 44	501	RunNo: 59379								
Prep Date: 4/24/2	2019 Analysis	Date: 4/	24/2019	SeqNo: 2000855			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics	DRO) 79	9.5	47.53	62.69	33.9	53.5	126	3.96	21.7	S		
Surr: DNOP	4.5		4.753		94.5	70	130	0	0			
Sample ID: MB-44	521 Samp	Туре: М	3LK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Bate	ch ID: 44	521	RunNo: 59378								
Prep Date: 4/24/2	2019 Analysis	Date: 4	25/2019	S	SeqNo: 2	001614	Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: DNOP	9.5		10.00		95.4	70	130					
Sample ID: LCS-4	1521 Samp	Type: LC	s	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics			
Client ID: LCSS		ch ID: 44		F	RunNo: 5	9378		-				
Prep Date: 4/24/2	2019 Analysis	Date: 4/	25/2019		SeqNo: 20		Units: %Rec					

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

Client: Project:	ENSOLU Lateral 3A										
Sample ID: LCS	6-44521	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCS	S	Batch ID: 44521			RunNo: 59378						
Prep Date: 4/2	24/2019	Analysis D	ate: 4/	25/2019	S	SeqNo: 2001615			;		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		3.8		5.000		76.9	70	130			

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

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

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: **1904B43** 26-Apr-19

Client:	ENSOLU	Μ												
Project:	Lateral 3A	A- 2												
Sample ID: RB		SampT	ype: ME	BLK	Tes	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PB	S	Batch	ID: G5	9391	F	RunNo: 59	9391							
Prep Date:		Analysis D	ate: 4/	24/2019	S	SeqNo: 20	000940	Units: mg/K	g					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Gasoline Range Org Surr: BFB	ganics (GRO)	ND 900	5.0	1000		90.0	73.8	119						
Sample ID: 2.5	UG GRO LCS	TestCode: EPA Method 8015D: Gasoline Range												
Client ID: LC	SS	Batch	ID: G5	9391	F	RunNo: 5 9	9391							
Prep Date:		Analysis Date: 4/24/2019			SeqNo: 2000941			Units: mg/Kg						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Gasoline Range Org	ganics (GRO)	24	5.0	25.00	0	97.5	80.1	123						
Surr: BFB		1000		1000		100	73.8	119						
Sample ID: 190	Sample ID: 1904B43-001AMS SampType: MS						TestCode: EPA Method 8015D: Gasoline Range							
Client ID: CS	-13	Batch	ID: G5	9391	RunNo: 59391									
Prep Date:		Analysis Date: 4/24/2019			SeqNo: 2000942			Units: mg/Kg						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Gasoline Range Or	ganics (GRO)	87	18	91.04	0	95.2	69.1	142						
Surr: BFB		4500		3642		122	73.8	119			S			
Sample ID: 190	04B43-001AMSE	SampT	ype: MS	SD	Tes	tCode: EF	PA Method	8015D: Gasc	line Rang	e				
Client ID: CS	-13	Batch	ID: G5	0301	RunNo: 59391									
	-15	Duton		5551	-									
Prep Date:	-15	Analysis D				SeqNo: 20	000943	Units: mg/K	g					
	-13			24/2019			000943 LowLimit	Units: mg/K HighLimit	g %RPD	RPDLimit	Qual			
Prep Date:		Analysis D	ate: 4/	24/2019	S			Ŭ	•	RPDLimit 20	Qual R			

- * 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

Itent: ENSOLUM Lateral 3A-2 ample ID: RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles rep Date: Analysis Date: 4/24/2019 SeqNo: 2000972 Units: mg/Kg nanyte Result POL SPK value SPK Kel Val %REC LowLimit HighLimit %RPD RPDLimit Qual nanyte Result POL SPK value SPK Kel Val %REC LowLimit HighLimit %RPD RPDLimit Qual nanyte Result POL SPK value SPK Kel Val %REC LowLimit HighLimit %RPD RPDLimit Qual signame ND 0.050 Intermed S3931 RunNo: 53391 S3931 Samptype: SampType: LCS TestCode: EPA Method 8021B: Volatiles Intermed Gamptype: Samptype:			 	- h 4	T					WO#:	1904B4				
najve: Result PDL SPK ref Val %REC result MIRE result Result PDL SPK ref Val %REC result MIRE result ND 0.06 result Result PDL SPK ref Val %REC result %REC <th cols<="" th=""><th>Hall Environme</th><th>ntai Anai</th><th>YSIS L</th><th>aborat</th><th>ory, Inc.</th><th></th><th></th><th></th><th></th><th></th><th>26-Apr-19</th></th>	<th>Hall Environme</th> <th>ntai Anai</th> <th>YSIS L</th> <th>aborat</th> <th>ory, Inc.</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>26-Apr-19</th>	Hall Environme	ntai Anai	YSIS L	aborat	ory, Inc.						26-Apr-19			
najve: Result PDL SPK ref Val %REC result MIRE result Result PDL SPK ref Val %REC result MIRE result ND 0.06 result Result PDL SPK ref Val %REC result %REC <th cols<="" th=""><th>Client: ENS</th><th>OLUM</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th>	<th>Client: ENS</th> <th>OLUM</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Client: ENS	OLUM												
ample ID: RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles ample ID: PBS Batch ID: B59391 RunNo: 59391 Units: mg/Kg rep Date: Analysis Date: 4/24/2019 SeqNo: 2000972 Units: mg/Kg nalyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual name ND 0.025 Units: mg/Kg RunNo: 59391 Start.4															
Hier ID: PBS Batch ID: B59391 RunNo: 59391 Units: mg/Kg rep Date: Analysis Date: 4/24/2019 SeqNo: 2000972 Units: mg/Kg nahyte Result PCL SPK value SPK Ref Val % REC LowLinit HighLinit % RPD. RPDLinit Qual represer ND 0.050 Serred EVEN <	Later	di 5/1 2													
rep Date:Analysis Date:4/24/2019Seq.No:200972Units:mg/KgnalyteResultPQLPK valueSPK valueSPK Ref Val% RECLowLimitHighLimit% RPDRPDLimitQualnazeneND0.05SPK valueSPK ValueSPK Ref Val% RECLowLimitHighLimit% RPDRPDLimitQualnatyteND0.0588.680120 </td <td>Sample ID: RB</td> <td>SampT</td> <td>Гуре: МЕ</td> <td>BLK</td> <td>Tes</td> <td>tCode: E</td> <td>PA Method</td> <td>8021B: Volat</td> <td>tiles</td> <td></td> <td></td>	Sample ID: RB	SampT	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Volat	tiles						
Rajyte Result PQL SPK ref Val % REC LowLimit HighLimit % RPD RPDLimit Qual nzene ND 0.025 HighLimit % RPD RPDLimit Qual	Client ID: PBS	Batc	h ID: B5	9391	F	RunNo: 5	9391								
nzeńe ND 0.025 uene ND 0.050 ytkerzene ND 0.050 surt. 4Fommluorobenzene 0.89 1.000 88.6 80 120 ample ID: 100NG BTEX LCS SampType: LCS TestCode: EPA Method 8021B: Volatiles silent ID: LCSS Batch ID: B59391 RunNo: 59391 RunNo: 59391 rep Date: Analysis Date: 4/24/2019 SeqNo: 200973 Units: mg/Kg nalyte Result POL SPK kef Val %REC LowLimit HighLimit Qual nazene 0.88 0.025 1.000 9 81.1 80 120 Veherzene 0.91 0.050 1.000 9 91.3 80 120 Veherzene 0.91 0.050 1.000 87.5 80 120 stient ID: 1904B43-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles stient ID: 1504B43-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles	Prep Date:	Analysis E	Date: 4/2	24/2019	5	SeqNo: 2	000972	Units: mg/k	٢g						
luene ND 0.050 wijbenzene ND 0.050 isens, Total ND 0.09 star: 4-Bromofuorobenzene 0.89 1.000 88.6 80 120 ample ID: 100NG BTEX LCS Sam: V=: I Test Code: EVA:tot No: 59391 rep Date: Analysis Date: 4/24/2019 Seq No: 2000973 Units: mg/rep RPD I.mit Qual nagene 0.88 0.02 1.000 0 88.1 80 120 0 0 88.1 80 120 0 0 91.9 80 120 0 0 91.9 80 120 0 0 0 0 10.00 0 91.9 80 120 0	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
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Surr. 4-Bromolluorobenzene0.891.00088.680120ample ID:100NG BTEX LCSSampType:LCSBatch ID:B59391RunNo:59391Units: mg/Kgrep Date:Analysis Date:4724/2019Seq No:2000973Units: mg/KgRPDRPDLimitQualnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitQualnanzene0.880.0251.000088.180120Value <t< td=""><td>Ethylbenzene</td><td>ND</td><td>0.050</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Ethylbenzene	ND	0.050												
TestCode: EPA Method 8021B: Volatiles ample ID: 100NG BTEX LCS SampType: KunN:: 59391 RunNo:: 59391 rep Date: Analysis Date: 4/24/2019 SeqNo:: 2000973 Units:: mg/Kg nalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual nanzene 0.88 0.025 1.000 0 88.1 80 120 luene 0.92 0.050 1.000 0 91.3 80 120 usene 0.92 0.050 1.000 0 92.2 80 120 start.4bromofluorobenzene 0.88 0.10 3.000 0 92.2 80 120 ample ID: 1904B43-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Units: mg/Kg nalyte Result PQL SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual <	Xylenes, Total	ND	0.10												
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Prep Date: Analysis Date: 4/24/2019 SeqNo: 2000973 Units: mg/Kg nalyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual nzene 0.88 0.025 1.000 0 88.1 80 120 ubene 0.92 0.050 1.000 0 91.9 80 120 ubene 0.92 0.050 1.000 0 91.3 80 120 ubenes, Total 2.8 0.10 3.000 0 92.2 80 120 surr 4.Bromofluorobenzene 0.88 1.000 87.5 80 120 1000 120 ample ID: 1904B43-002AMS SampType: MS TestCode: EVAtion (Branches) 59391 101ts: mg/Kg nalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual nalyte Result PQL SPK value SPK Ref Val %REC LowLimit Hi	Sample ID: 100NG BTEX	LCS Samp	Гуре: LC	S	Tes	tCode: E	PA Method	8021B: Volat	tiles						
nalyte Result PQL SPK value SPK ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual nzene 0.88 0.025 1.000 0 88.1 80 120 luene 0.92 0.050 1.000 0 91.3 80 120<	Client ID: LCSS				F	RunNo: 5	9391								
nzene 0.88 0.025 1.000 0 88.1 80 120 luene 0.92 0.050 1.000 0 91.9 80 120 lylberzene 0.91 0.050 1.000 0 91.3 80 120 surr. 4 Bromofluorobenzene 0.88 1.000 87.5 80 120 surr. 4 Bromofluorobenzene 0.88 1.000 80.6 71 132 surr. 4 Bromofluorobenzene 3.1 0.19 3.794 0 81.8 63.9 127 surr. 4 Bromofluorobenzene 3.1 0.19 3.794 0 82.6 71 132 surr. 4 Bromofluorobenzene 3.5 3.794 91.7 80 120 surr. 4 Bromofluorobenzene 3.5 0.794 0 117 71 132 34.9 20 R supene 4.5 0.19 3.794 0.117 71 132 34.9 20 R supene 4.5 0.19 3.794 0 117 71 132 34.9 20 R supene 4.5 0.19 3.794 0 117 71 132 34.9 20 R supene 4.5 0.19 3.794 0 117 71 132 34.9 20 R supene 4.5 0.19 3.794 0 117 71 132 34.9 20 R supene 5.70al 1.4 0.38 11.38 0 119 71.8 131 35.3 20 R	Prep Date:	Analysis E	Date: 4/	24/2019	S	SeqNo: 2	000973	Units: mg/k	ζg						
huene 0.92 0.050 1.000 0 91.9 80 120 nylbenzene 0.91 0.050 1.000 0 91.3 80 120 sume, Total 2.8 0.10 3.000 0 92.2 80 120 sume, 4-Bromofluorobenzene 0.88 1.000 87.5 80 120 ample ID: 1904B43-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles tient ID: CS-14 Batch ID: B59391 TestCode: EPA Method 8021B: Volatiles nanylet Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual nzene 3.1 0.095 3.794 0 81.8 63.9 120 120 uluene 3.2 0.19 3.794 0.03945 84.0 69.9 131 131 131 sybenzene 3.1 0.19 3.794 0.836 71.8 131 140 surt -4 Bromofluorobenzene 3.5 IT.38 <td>Analyte</td> <td>Result</td> <td>PQL</td> <td>SPK value</td> <td>SPK Ref Val</td> <td>%REC</td> <td>LowLimit</td> <td>HighLimit</td> <td>%RPD</td> <td>RPDLimit</td> <td>Qual</td>	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
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Andrews, Total 2.8 0.10 3.000 0 92.2 80 120 Surr: 4-Bromofluorobenzene 0.88 1.000 87.5 80 120 ample ID: 1904B43-002AMS SampType: M: TestCode: EPA Method 8021B: Volatiles itient ID: CS-14 Batch ID: B59391 RunNo: 59391 Units: mg/Kg rep Date: Analysis Date: 4/24/2019 SeqNo: 2000974 Units: mg/Kg nalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual nzene 3.1 0.095 3.794 0 81.8 63.9 127 ulene 3.2 0.19 3.794 0 82.6 71 132 ulenes, Total 9.5 0.38 11.38 0 83.6 71.8 131 Surr: 4-Bromofluorobenzene 3.5 3.794 91.7 80 120	Toluene	0.92	0.050	1.000	0	91.9	80	120							
Sur: 4-Bromofluorobenzene 0.88 1.000 87.5 80 120 ample ID: 1904B43-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Image: Second Seco	Ethylbenzene	0.91	0.050	1.000	0	91.3	80	120							
Surr 4-Bromofluorobenzene 0.88 1.00 87.5 80 120 ample ID: 1904B43-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Image 10: 1904B43-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles rep Date: Analysis Date: 4/24/2019 SeqNo: 2000974 Units: mg/Kg nalyte Result PQL SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual nanene 3.1 0.095 3.794 0 81.8 63.9 127 Image 100 Image	Xylenes, Total	2.8	0.10	3.000	0	92.2	80	120							
Higher ID: CS-14 Batch ID: B59391 RunNo: 59391 Irep Date: Analysis Date: $4/24/2019$ SeqNo: 2000974 Units: mg/Kg Inalyte Result PQL SPK value SPK Ref Val $\% REC$ LowLimit HighLimit $\% RPD$ RPDLimit Qual Inzene 3.1 0.095 3.794 0 81.8 63.9 127 132 140	Surr: 4-Bromofluorobenzene	0.88		1.000		87.5	80	120							
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nalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual nzene 3.1 0.095 3.794 0 81.8 63.9 127 luene 3.2 0.19 3.794 0.03945 84.0 69.9 131 nylbenzene 3.1 0.19 3.794 0 82.6 71 132 lenes, Total 9.5 0.38 11.38 0 83.6 71.8 131 surr: 4-Bromofluorobenzene 3.5 3.794 91.7 80 120	Client ID: CS-14	Batc	h ID: B5	9391	F	RunNo: 5	9391								
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nylbenzene 3.1 0.19 3.794 0 82.6 71 132 lenes, Total 9.5 0.38 11.38 0 83.6 71.8 131 Surr: 4-Bromofluorobenzene 3.5 3.794 91.7 80 120 ample ID: 1904B43-002AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles Volatiles stient ID: CS-14 Batch ID: B59391 RunNo: 59391 Units: mg/Kg rep Date: Analysis Date: 4/24/2019 SeqNo: 2000975 Units: mg/Kg nalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Inzene 4.3 0.095 3.794 0.03945 118 69.9 131 33.2 20 R Nylbenzene 4.5 0.19 3.794 0 117 71 132 34.9 20 R Iuene 4.5 0.19 3.794 0 117 71 132 34.9 20 R Iuene 4.5	Toluene	3.2	0.19	3.794	0.03945	84.0	69.9	131							
Vertication 9.5 0.38 11.38 0 83.6 71.8 131 Surr: 4-Bromofluorobenzene 3.5 3.794 91.7 80 120 aample ID: 1904B43-002AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles stient ID: CS-14 Batch ID: B59391 RunNo: 59391 rep Date: Analysis Date: 4/24/2019 SeqNo: 2000975 Units: mg/Kg inaple Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual inzene 4.3 0.095 3.794 0 114 63.9 127 32.6 20 R iluene 4.5 0.19 3.794 0.03945 118 69.9 131 33.2 20 R nylbenzene 4.5 0.19 3.794 0 117 71 132 34.9 20 R nylbenzene 4.5 0.19 3.794 0 117 71 132 34.9	Ethylbenzene		0.19	3.794	0			132							
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Batch ID: B59391 RunNo: 59391 Image: Interp Date: Analysis Date: 4/24/2019 SeqNo: 2000975 Units: mg/Kg Inalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Inzene 4.3 0.095 3.794 0 114 63.9 127 32.6 20 R Iuene 4.5 0.19 3.794 0.03945 118 69.9 131 33.2 20 R Iulenes, Total 14 0.38 11.38 0 119 71.8 131 35.3 20 R	Surr: 4-Bromofluorobenzene				-										
Batch ID: B59391 RunNo: 59391 Image: Interp Date: Analysis Date: 4/24/2019 SeqNo: 2000975 Units: mg/Kg Inalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Inzene 4.3 0.095 3.794 0 114 63.9 127 32.6 20 R Iuene 4.5 0.19 3.794 0.03945 118 69.9 131 33.2 20 R Iulenes, Total 14 0.38 11.38 0 119 71.8 131 35.3 20 R	Sample ID: 1904B43-002	AMSD Samo	Гуре: МS	SD.	Tes	tCode: E	PA Method	8021B: Volat	tiles						
Analysis Date: 4/24/2019 SeqNo: 2000975 Units: mg/Kg Inalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Inzene 4.3 0.095 3.794 0 114 63.9 127 32.6 20 R Iuene 4.5 0.19 3.794 0.03945 118 69.9 131 33.2 20 R hylbenzene 4.5 0.19 3.794 0 117 71 132 34.9 20 R Ienes, Total 14 0.38 11.38 0 119 71.8 131 35.3 20 R	Client ID: CS-14							_							
Inzene 4.3 0.095 3.794 0 114 63.9 127 32.6 20 R luene 4.5 0.19 3.794 0.03945 118 69.9 131 33.2 20 R nylbenzene 4.5 0.19 3.794 0 117 71 132 34.9 20 R lenes, Total 14 0.38 11.38 0 119 71.8 131 35.3 20 R	Prep Date:							Units: mg/k	٤g						
Iuene4.50.193.7940.0394511869.913133.220Rnylbenzene4.50.193.79401177113234.920Rlenes, Total140.3811.38011971.813135.320R	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
hylbenzene4.50.193.79401177113234.920Rlenes, Total140.3811.38011971.813135.320R	Benzene	4.3	0.095	3.794	0	114	63.9	127	32.6	20	R				
hylbenzene4.50.193.79401177113234.920Rlenes, Total140.3811.38011971.813135.320R	Toluene	4.5	0.19	3.794	0.03945	118	69.9	131	33.2	20	R				
lenes, Total 14 0.38 11.38 0 119 71.8 131 35.3 20 R	Ethylbenzene	4.5			0	117		132	34.9	20	R				
	Xylenes, Total	14	0.38		0	119	71.8	131	35.3	20					
	Surr: 4-Bromofluorobenzene									0					

- 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

QC SUMMARY REPORT

- 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

ANAL	CONMENTAL YSIS RATORY	TEL: 505-345-39	4901 Hav Ibuquerque, N	vkins NE M 87109 Sa 145-4107	ample Log-In (Check List
Client Name:	ENSOLUM AZTEC	Work Order Numb	er: 1904B43		RcptNo	: 1
Received By:	Erin Melendrez	4/24/2019 8:20:00 A	M	am ;	6	
Completed By:	Anne Thorne	4/24/2019 8:30:20 A	м	Ann S	A-	
Reviewed By:	ENM	4/24/19				
Labeled.	by: 04/241(9	I				
Chain of Cus) ·					
1. Is Chain of Cu	ustody complete?		Yes 🖌	No 🗌	Not Present	
2. How was the	sample delivered?		<u>Courier</u>			
<u>Log In</u>						
	pt made to cool the samp	bles?	Yes 🔽	No 🗌] NA 🗌	
·						
4. Were all samp	oles received at a tempera	ature of >0° C to 6.0°C	Yes 🗹	No 🗌] NA 🗆	
5. Sample(s) in p	proper container(s)?		Yes 🗹	No 🗌]	
6 Sufficient sam	ple volume for indicated to	act/c)2	Yes 🔽	No 🗌]	
	except VOA and ONG) pr		Yes 🗹]	
	tive added to bottles?		Yes 🗌	No 🔽		
·						
9. VOA vials have	e zero headspace?		Yes 🗌	No 🗌		
10. Were any sam	nple containers received b	proken?	Yes 🗀	No 🗹	# of preserved	
	ork match bottle labels?		Yes 🗹	No	bottles checked for pH:	
	Incies on chain of custody	/)	tes 💌			r >12 unless noted)
12. Are matrices c	orrectly identified on Chai	in of Custody?	Yes 🗹	No 🗔	Adjusted?	
-	analyses were requested	17	Yes 🗹	No 🗌		
	ng times able to be met? Istomer for authorization.)		Yes 🗹	No 🗌	Checked by:	
	ing (if applicable)			_	·	
15. Was client not	tified of all discrepancies	with this order?	Yes 🗌	No		7
Person I	Notified:	Date				
By Who	m:	Via:	eMail] Phone 🗌 Fa	ax 🔄 In Person	
Regardi						
Client In	istructions:					
16. Additional ren	narks:					
CUSTO	DY SEAL INTACT ON SC	DIL JARS/at 4/24/19				
17. <u>Cooler Inform</u>	<u>mation</u>	en an		V 1771 - Berlindel Karallader	anal di	

Cooler No Ter	nn °C Conditio	n Seal Ir	stact Sea	l No - Sea	Date Signe	A Rv
			លោកសម្តីដែលដែរ។			
1 2.1	Good	Yes				1
here was more warrant an and an all for a second			******	a service and a service of the servi	••••••••••••••••••••••••••••••••••••••	******

Chair	1-of-C	Chain-of-Custody Record	Turn-Around Time:	Time:	Ulzylia							ENVTDONMENTAL		
Client: Ens	Enselumille	LLC	□ Standard	K Rush	SAG			ANA		ISI,	ABC	ANALYSIS LABORATORY	f Å	-
			Project Name:	54-32 1 M				www.	Jallenvi	ronmer	www.hallenvironmental.com			
Mailing Address:	یاتھی) انھارہ	LOCIO S. PLO PORANCIESNITE A	5			49	01 Haw	4901 Hawkins NE		Idnerq	- Albuquerque, NM 87109	37109		
Aztec, NM STUID	M 87U	10	Project #: USA (a46052	09 CC) V	52	۲ 	el. 505-	Tel. 505-345-3975	5	 ax 505	Fax 505-345-4107	07		
Phone #;							i		Analy	Analysis Request	quest			
email or Fax#:	KSUMI	email or Fax#: KSummerSevenselum iron	Project Manager:		KSummers				*O [≉]		(ţu			
QA/QC Package:	•						s'8	SN	S Ԡ		əsq			
□ Standard		Level 4 (Full Validation)					ЪС	1150	οч		A\tr			
Accreditation:	D Az Co	mpliance		- 2					^{'7} ON	()				
				K les	L NO			0 0		/ 0/	4) u			
			Rader Tempingter 5					168			uloi	-		
			kr oy jzylig Container	S	HEALAND	9108:H	res 19M) E	yd sh	A 8 / 8 / 7 F, Br,	0 (VO 0 (Ser	ilo) le	مسماد		
Date Time	Matrix	Sample Name	_	Type	190			ŀ∀ł			stoT	<u> </u>		
423/19 1365	N:	CS-13		6001	201	$\langle \langle \rangle \rangle$					\times			
4/23/19/1310	S	CS-14	1 402 Jar	2001	202	\star \star					\times			
4 23/19 1315		25-15	I yez Jar	6001	502	\times					\times			
4/23/9 1320		cs-16	1 402 Jar	(00)	h02-	\prec \prec					\times			
7/13/19 1325	S	(5-17	1 402 Jar	C001	SN	$X \langle$					\times			
4/23/19 1330		5-18) doz Jar	1007	902	\checkmark \checkmark					\times			
4/23/19/1335	S	62-19	1462 Jar	C 001	102	Ч Х		_			X			
423,191,34D	J	<u> </u>) tez Jar	6001	802	\downarrow \checkmark					\times			
														1
		SHA	ET.											
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Date: Time: W23M 1432	Relinquished by:	H-M-M	Received by:	Via L D. D L	Date Time 4/23/19 /432	Remarks:	<i>20</i>	PM-TO Piv Ilex	- 100 Lov-	Tom Long		(EPEOD)		
Date: Time:	Relinquished by:	ied by:	Received by:	Via: COUN	≓ [~]	CANFINI		N ev						
4/23/10 1267	1/JAM	Mate Walter	I. J.	J	4/124/19		<u>-</u>		ນ	125	0 r			
If necessa		f necessary samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.	outracted to other ac	credited laboratori	es. This serves as notice of thi	s possibility.	Any sub-ce	ontracted d	ata will be	slearly not	ated on the	anaiytical report.		



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

April 30, 2019

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

OrderNo.: 1904C94

RE: Lateral 3A 2

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/26/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 4/30/2019

4/28/2019 10:05:41 AM 44558

Ũ					Date Reported. 4/50/20	17
CLIENT: ENSOLUM		Cl	ient Sample I	D: CS	5-21	
Project: Lateral 3A 2		(Collection Dat	e: 4/2	25/2019 1:40:00 PM	
Lab ID: 1904C94-001	Matrix: SOIL		Received Dat	e: 4/2	26/2019 8:15:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	4/26/2019 6:52:18 PM	44579
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	: том
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/30/2019 2:35:19 AM	44564
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/30/2019 2:35:19 AM	44564
Surr: DNOP	102	70-130	%Rec	1	4/30/2019 2:35:19 AM	44564
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/28/2019 10:05:41 AM	44558
Surr: BFB	94.3	73.8-119	%Rec	1	4/28/2019 10:05:41 AM	44558
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/28/2019 10:05:41 AN	44558
Toluene	ND	0.049	mg/Kg	1	4/28/2019 10:05:41 AM	44558
Ethylbenzene	ND	0.049	mg/Kg	1	4/28/2019 10:05:41 AM	44558
Xylenes, Total	ND	0.098	mg/Kg	1	4/28/2019 10:05:41 AM	44558

93.7

80-120

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

Qualifiers: *

Surr: 4-Bromofluorobenzene

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

- B Analyte detected in the associated Method Blank
- E Value above quantitation range

%Rec 1

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

Page 1 of 5

WO#: **1904C94** *30-Apr-19*

Client:ENSOLUMProject:Lateral 3A 2

Sample ID: MB-44579	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 44579	RunNo: 59463		
Prep Date: 4/26/2019	Analysis Date: 4/26/2019	SeqNo: 2003545	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-44579	SampType: Ics			
Sample ID. LC3-443/9	Sampi ype. ICS	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 44579	RunNo: 59463	300.0: Anions	
·			300.0: Anions Units: mg/Kg	
Client ID: LCSS	Batch ID: 44579 Analysis Date: 4/26/2019	RunNo: 59463	Units: mg/Kg	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

Client:ENSOLUMProject:Lateral 3A 2

Sample ID: LCS-44564	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	n ID: 44	564	F	RunNo: 59	9489				
Prep Date: 4/26/2019	Analysis D	ate: 4/	29/2019	S	SeqNo: 20	004951	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	107	63.9	124			
Surr: DNOP	5.2		5.000		105	70	130			
Surr: DNOP Sample ID: MB-44564		ype: ME					130 8015M/D: Die	esel Range	e Organics	
	SampT	⁻ ype: ME n ID: 44	BLK	Tes		PA Method		esel Range	e Organics	
Sample ID: MB-44564	SampT	n ID: 44	3LK 564	Tes	tCode: EF	PA Method 9489		Ū	e Organics	
Sample ID: MB-44564 Client ID: PBS	SampT Batch	n ID: 44	BLK 564 29/2019	Tes	tCode: EF	PA Method 9489	8015M/D: Die	Ū	e Organics	Qual
Sample ID: MB-44564 Client ID: PBS Prep Date: 4/26/2019	SampT Batch Analysis D	n ID: 44 Date: 4/	BLK 564 29/2019	Tes F S	tCode: EF RunNo: 59 SeqNo: 20	PA Method 9489 904952	8015M/D: Die Units: mg/K	ſg	-	Qual
Sample ID: MB-44564 Client ID: PBS Prep Date: 4/26/2019 Analyte	SampT Batch Analysis D Result	n ID: 44 Date: 4/ PQL	BLK 564 29/2019	Tes F S	tCode: EF RunNo: 59 SeqNo: 20	PA Method 9489 904952	8015M/D: Die Units: mg/K	ſg	-	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 3 of 5

1000

WO#: 1904C94 30-Apr-19

Client:ENSOLProject:Lateral	-									
Sample ID: MB-44558	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: PBS	Batch	n ID: 44	558	F	RunNo: 5	9477				
Prep Date: 4/26/2019	Analysis D	ate: 4/	27/2019	S	SeqNo: 2	003634	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		91.0	73.8	119			
Sample ID: LCS-44558	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: LCSS	Batch	n ID: 44	558	F	RunNo: 5	9477				
Prep Date: 4/26/2019	Analysis D	ate: 4/	27/2019	S	SeqNo: 2	003635	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.6	80.1	123			
Surr BEB	1000		1000		104	73.8	110			

104

73.8

119

1000

Qualifiers:

Surr: BFB

- 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#: **1904C94**

30-Apr-19

	ISOLUM teral 3A 2									
Sample ID: MB-44558	Samp	Type: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Bato	h ID: 44	558	F	RunNo: 5	9477				
Prep Date: 4/26/2019	Analysis	Date: 4/	27/2019	S	SeqNo: 2	003680	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-Bromofluorobenzen	e 0.90		1.000		89.8	80	120			
Sample ID: LCS-44558	Samp	Type: LC	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Bate	h ID: 44	558	F	RunNo: 5	9477				
Prep Date: 4/26/2019	Analysis	Date: 4/	27/2019	S	SeqNo: 2	003681	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	91.4	80	120			
Toluene	0.94	0.050	1.000	0	93.8	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.1	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.0	80	120			
Surr: 4-Bromofluorobenzen	e 0.93		1.000		92.6	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- 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 5 of 5

Fage 3

ANALYSIS LABORATORY		490 uquerq 5 FAX:		Sa	mple Log-In Check List
Client Name: ENSOLUM AZTEC	Work Order Number	: 1904	4C94		RcptNo: 1
Received By: Anne Thorne Completed By: Erin Melendrez Reviewed By: ENM LB: DAD 4/26/19	4/26/2019 8:15:00 AM 4/26/2019 9:04:02 AM 4 / Z () / ()		C M	Anne A	
 Chain of Custody 1. Is Chain of Custody complete? 2. How was the sample delivered? 		Yes <u>Cou</u>		No 🗌	Not Present
Log In 3. Was an attempt made to cool the samples?		Yes	\checkmark	No 🗌	
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes		No 🗌	NA 🗌
 Sample(s) in proper container(s)? Sufficient sample volume for indicated test(s Are samples (except VOA and ONG) proper Was preservative added to bottles? 	A	Yes Yes Yes Yes	V	No 🗌 No 🗍 No 🗍 No 🔽	NA 🗌
 9. VOA vials have zero headspace? 10. Were any sample containers received broke 	en?	Yes Yes		No 🗌 No 🗹	No VOA Vials # of preserved bottles checked
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)12. Are matrices correctly identified on Chain of	Custody?		v 1	No 🗌	for pH: (<2 or >12 unless noted) Adjusted?
13. Is it clear what analyses were requested?14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes Yes		No 🗌 No 🗌	Checked by: DAD 4/26/19
<u>Special Handling (if applicable)</u>			_		_
15. Was client notified of all discrepancies with Person Notified: By Whom: Regarding: Client Instructions: 16. Additional remarks:	this order? Date: Via:	Yes] eMa		No 🗌	NA 🗹

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			
2	3.9	Good	Yes			

Chain-of-Custody Record	Turn-Around Time: 3 day		
Client: Ensalum, LLC	Destandard Rush SHALEDAY		ENVIRONMEN I AL VSTS I ARORATORV
	1	www.hallen	Sut 1
Mailing Address: 6065, Pie locande Suit A		4901 Hawkins NE - Al	Albuquerque, NM 87109
	Project #: 05 ALD & 605 D	Tel. 505-345-3975	Fax 505-345-4107
Phone #:		Anal	Analysis Request
email or Fax#: XSMMMP (S& ensolution. CON	KSMMM (S & ensolum. con Project Manager: KSWMMLS	(0	
QA/QC Package:		SMS s'8: МR	
Standard Level 4 (Full Validation)			
:uo	r: PDecchilly	7 DF 8082 728 728	(
NELAC Other	D'No	05 8/8 10 01 204	(AC
EDD (Type)		12) sbic 10 10 15	נש -^(
	Cooler Temp(including cF): / 9 3 . 9 °	15D etho 28 y 58 %	(AO ime ofilo
	Preservative	- X X X X X X X X X X X X X X X X X X X	V) 092 0131 Cd 0131 Cd 021 021 021 021 021 021 021 021 021 021
Date Time Matrix Sample Name	JJ,	11 13 13 13	28 28
4/25/19/1340 S CS-21	1402 Jar Coul -001	X	X
Date: Time: Relinquished by: UNSM 1330 AMANA	Received by: Via: Date Time F	Remarks: P.M - TOM PAN YEV-	m Long (EPROV)
Date: Time: Relinquished by:	Via: Date TI	3 Non AFE	١
If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories.		This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.	e clearly notated on the analytical report.



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

April 09, 2019

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

RE: Lateral 3A 2

OrderNo.: 1904254

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/4/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report
Lab Order 1904254

Date Reported: 4/9/2019

CLIENT: ENSOLUM Project: Lateral 3A 2				ample I ion Dot		2-1 8/2019 11:35:00 AM	
Project: Lateral 3A 2 Lab ID: 1904254-001	Matrix: SOIL	,				4/2019 8:14:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	86	60		mg/Kg	20	4/5/2019 3:26:14 PM	44147
EPA METHOD 8015D MOD: GASOLI	NE RANGE					Analyst:	RAA
Gasoline Range Organics (GRO)	110	4.7		mg/Kg	1	4/7/2019 11:30:41 AM	44111
Surr: BFB	105	70-130		%Rec	1	4/7/2019 11:30:41 AM	44111
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS					Analyst:	Irm
Diesel Range Organics (DRO)	2500	46		mg/Kg	5	4/8/2019 12:12:18 PM	44127
Motor Oil Range Organics (MRO)	480	230		mg/Kg	5	4/8/2019 12:12:18 PM	44127
Surr: DNOP	148	70-130	S	%Rec	5	4/8/2019 12:12:18 PM	44127
EPA METHOD 8260B: VOLATILES S	HORT LIST					Analyst:	RAA
Benzene	ND	0.024		mg/Kg	1	4/7/2019 11:30:41 AM	44111
Toluene	0.76	0.047		mg/Kg	1	4/7/2019 11:30:41 AM	44111
Ethylbenzene	0.46	0.047		mg/Kg	1	4/7/2019 11:30:41 AM	44111
Xylenes, Total	6.7	0.095		mg/Kg	1	4/7/2019 11:30:41 AM	44111
Surr: 1,2-Dichloroethane-d4	89.2	70-130		%Rec	1	4/7/2019 11:30:41 AM	44111
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	4/7/2019 11:30:41 AM	44111
Surr: Dibromofluoromethane	93.7	70-130		%Rec	1	4/7/2019 11:30:41 AM	44111
Surr: Toluene-d8	92.2	70-130		%Rec	1	4/7/2019 11:30:41 AM	44111

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

Qualifiers: E

- EValue above quantitation rangeNDNot Detected at the Reporting Limit
- RL Reporting Detection Limit

- H
 Holding times for preparation or analysis exceeded

 PQL
 Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 1904254

Date Reported: 4/9/2019

CLIENT: ENSOLUM	Client Sample ID: FP-2 Collection Date: 4/3/2019 11:40:00 AM								
Project: Lateral 3A 2									
Lab ID: 1904254-002	Matrix: SOIL		Recei	ved Dat	e: 4/4	/2019 8:14:00 AM			
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS						Analys	t: MRA		
Chloride	120	60		mg/Kg	20	4/5/2019 3:38:38 PM	44147		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS			Analyst: C					
Diesel Range Organics (DRO)	1300	19		mg/Kg	2	4/5/2019 5:16:29 PM	44127		
Motor Oil Range Organics (MRO)	260	97		mg/Kg	2	4/5/2019 5:16:29 PM	44127		
Surr: DNOP	110	70-130		%Rec	2	4/5/2019 5:16:29 PM	44127		
EPA METHOD 8015D: GASOLINE RANGE						Analys	t: RAA		
Gasoline Range Organics (GRO)	10	4.9		mg/Kg	1	4/6/2019 4:58:46 PM	44112		
Surr: BFB	153	73.8-119	S	%Rec	1	4/6/2019 4:58:46 PM	44112		
EPA METHOD 8021B: VOLATILES						Analys	t: RAA		
Benzene	ND	0.024		mg/Kg	1	4/6/2019 4:58:46 PM	44112		
Toluene	ND	0.049		mg/Kg	1	4/6/2019 4:58:46 PM	44112		
Ethylbenzene	ND	0.049		mg/Kg	1	4/6/2019 4:58:46 PM	44112		
Xylenes, Total	0.94	0.097		mg/Kg	1	4/6/2019 4:58:46 PM	44112		
Surr: 4-Bromofluorobenzene	97.3	80-120		%Rec	1	4/6/2019 4:58:46 PM	44112		

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers:

Е

- Value above quantitation range ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

- Н Holding times for preparation or analysis exceeded PQL Practical Quanitative Limit
- S
- W
 - Sample container temperature is out of limit as specified at testcode
- % Recovery outside of range due to dilution or matrix
- Page 2 of 12

Analytical Report
Lab Order 1904254

Date Reported: 4/9/2019

CLIENT: ENSOLUM	Client Sample ID: FP-3 Collection Date: 4/3/2019 11:45:00 AM								
Project: Lateral 3A 2									
Lab ID: 1904254-003	Matrix: SOIL		Recei	ved Dat	e: 4/4	/2019 8:14:00 AM			
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS						Analys	t: MRA		
Chloride	120	60		mg/Kg	20	4/5/2019 3:51:03 PM	44147		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS		Analyst: Cl						
Diesel Range Organics (DRO)	2400	47		mg/Kg	5	4/5/2019 6:05:04 PM	44127		
Motor Oil Range Organics (MRO)	490	240		mg/Kg	5	4/5/2019 6:05:04 PM	44127		
Surr: DNOP	141	70-130	S	%Rec	5	4/5/2019 6:05:04 PM	44127		
EPA METHOD 8015D: GASOLINE RANGE						Analys	t: RAA		
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/6/2019 6:08:42 PM	44112		
Surr: BFB	97.7	73.8-119		%Rec	1	4/6/2019 6:08:42 PM	44112		
EPA METHOD 8021B: VOLATILES						Analys	t: RAA		
Benzene	ND	0.024		mg/Kg	1	4/6/2019 6:08:42 PM	44112		
Toluene	ND	0.049		mg/Kg	1	4/6/2019 6:08:42 PM	44112		
Ethylbenzene	ND	0.049		mg/Kg	1	4/6/2019 6:08:42 PM	44112		
Xylenes, Total	0.20	0.097		mg/Kg	1	4/6/2019 6:08:42 PM	44112		
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	4/6/2019 6:08:42 PM	44112		

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

Qualifiers: E Value above quantitation range

- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

- H
 Holding times for preparation or analysis exceeded

 PQL
 Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904254** *09-Apr-19*

	OLUM ral 3A 2			
Sample ID: MB-44147	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 44147	RunNo: 58920		
Prep Date: 4/5/2019	Analysis Date: 4/5/2019	SeqNo: 1982048	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID: LCS-44147	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 44147	RunNo: 58920		
Prep Date: 4/5/2019	Analysis Date: 4/5/2019	SeqNo: 1982049	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 92.7 90	110	

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

Client: ENSOL	JUM		
Project: Lateral	3A 2		
Sample ID: MB-44127	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 44127	RunNo: 58929	
Prep Date: 4/4/2019	Analysis Date: 4/5/2019	SeqNo: 1981904	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10		
Motor Oil Range Organics (MRO)	ND 50		
Surr: DNOP	10 10.00	101 70	130
Sample ID: LCS-44127	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 44127	RunNo: 58929	
Prep Date: 4/4/2019	Analysis Date: 4/5/2019	SeqNo: 1981905	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 93.6 63.9	124
Surr: DNOP	4.8 5.000	95.3 70	130
Sample ID: MB-44133	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 44133	RunNo: 58929	
Prep Date: 4/4/2019	Analysis Date: 4/5/2019	SeqNo: 1983932	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Surr: DNOP	13 10.00	130 70	130 S
Sample ID: LCS-44133	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 44133	RunNo: 58929	
Prep Date: 4/4/2019	Analysis Date: 4/5/2019	SeqNo: 1983933	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Surr: DNOP	4.7 5.000	94.6 70	130

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
 - S % Recovery outside of range due to dilution or matrix

WO#: **1904254**

09-Apr-19

Client: ENSOLUM Project: Lateral 3A 2 Sample ID: 1904254-002AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: FP-2 Batch ID: 44112 RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/6/2019 SeqNo: 1982804 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analvte Result PQL LowLimit HiahLimit Qual 10.09 Gasoline Range Organics (GRO) 29 4.7 23.65 78.1 69.1 142 Surr: BFB 1500 946.1 155 73.8 119 S Sample ID: 1904254-002AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: FP-2 Batch ID: 44112 RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/6/2019 SeqNo: 1982805 Units: mg/Kg HighLimit Analyte Result PQL SPK value SPK Ref Val %REC LowLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 30 4.6 23.00 10.09 84.7 69.1 142 3.49 20 Surr: BFB 1400 S 920.0 155 73.8 119 0 0 Sample ID: LCS-44112 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 44112 RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/6/2019 SeqNo: 1982861 Units: mg/Kg PQL SPK value SPK Ref Val %REC %RPD RPDLimit Analyte Result LowLimit HighLimit Qual Gasoline Range Organics (GRO) 23 5.0 25.00 0 90.1 80.1 123 Surr: BFB 1000 1000 104 73.8 119 Sample ID: LCS-44113 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 44113 RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/7/2019 SeqNo: 1982863 Units: %Rec PQL SPK value SPK Ref Val %REC %RPD RPDLimit Analyte Result LowLimit HighLimit Qual Surr: BFB 1000 1000 101 73.8 119 Sample ID: LCS-44114 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 44114 RunNo: 58955 Prep Date: Analysis Date: 4/7/2019 SeqNo: 1982864 4/4/2019 Units: %Rec SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual Surr: BFB 990 1000 98.9 73.8 119 Sample ID: MB-44112 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 44112 RunNo: 58955 Prep Date: 4/4/2019 Analysis Date: 4/6/2019 SeqNo: 1982865 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 940 1000 94.0 119 73.8

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

 RL
 Reporting Detection Limit

 W
 Sample container temperature is out of limit as specified at testcode

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

WO#: **1904254** *09-Apr-19*

Client:ENSOLUMProject:Lateral 3A 2

Comple ID: ND 44442			Т					-	
Sample ID: MB-44113	SampType: MB	LN	Tes		PA wethod	8015D: Gasol	ine Range	e	
Client ID: PBS	Batch ID: 441	13	F	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis Date: 4/7	7/2019	5	SeqNo: 1	982866	Units: %Rec			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	010	1000		90.8	73.8	119			
	910	1000		90.8	73.0	119			
	SampType: MB		Tes			8015D: Gasol	ine Range	e	
Sample ID: MB-44114 Client ID: PBS		LK			PA Method	-	ine Range	e	
Sample ID: MB-44114	SampType: MB	ELK 14	F	tCode: El	PA Method 8955	-	ine Range	e	
Sample ID: MB-44114 Client ID: PBS	SampType: MB Batch ID: 441 Analysis Date: 4/7	JLK 114 7/2019	F	stCode: El RunNo: 5 SeqNo: 1	PA Method 8955 982867	8015D: Gasol	ine Range %RPD	e RPDLimit	Qual

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

Client:	ENSOLU	JM									
Project:	Lateral 3.	A 2									
Sample ID:	1904254-003AMS	SampT	ype: MS	;	Tes	tCode: EF	PA Method	8021B: Volat	iles		
Client ID:	FP-3	Batcl	n ID: 441	12	F	RunNo: 58	3955				
Prep Date:	4/4/2019	Analysis D	ate: 4/	6/2019	S	SeqNo: 19	982870	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.76	0.023	0.9276	0	82.0	63.9	127	, or a 2		4.66
Toluene		0.83	0.046	0.9276	0.01940	87.0	69.9	131			
Ethylbenzene		0.83	0.046	0.9276	0.01754	87.1	71	132			
Xylenes, Total		2.7	0.093	2.783	0.2048	88.3	71.8	131			
•	nofluorobenzene	0.87		0.9276		93.7	80	120			
Sampla ID:	1904254-003AMSI		ype: MS		Too	tCodo: EE	A Mothod	9021 Rt Volat	iloo		
Client ID:			n ID: 441		TestCode: EPA Method 8021B: Volatiles RunNo: 58955						
Prep Date:		Analysis D				SeqNo: 19		Units: mg/K	a		
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.76	0.023	0.9242	0	82.2	63.9	127	0.115	20	Quui
Toluene		0.83	0.046	0.9242	0.01940	87.4	69.9	131	0.0441	20	
Ethylbenzene		0.83	0.046	0.9242	0.01754	87.9	71	132	0.513	20	
Xylenes, Total		2.7	0.092	2.773	0.2048	89.3	71.8	131	0.784	20	
	nofluorobenzene	0.81	0.002	0.9242	0.2010	87.7	80	120	0.701	0	
Sample ID:	LCS-44112	Samol	ype: LC	\$	Tes	tCode: F	PA Method	8021B: Volat	ilos		
Client ID:			יאסי, בס וD: 44			RunNo: 58			lies		
Prep Date:		Analysis E				SeqNo: 19		Units: mg/K	a		
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.84	0.025	1.000	0	83.7	80	120	, or a 2		
Toluene		0.90	0.050	1.000	0						
Ethylbenzene		0.00				90.1	80	120			
		0.89	0.050			90.1 89 3	80 80	120 120			
,		0.89 2 7	0.050	1.000	0	89.3	80	120			
Xylenes, Total	ofluorobenzene	2.7	0.050 0.10	1.000 3.000		89.3 90.5	80 80	120 120			
Xylenes, Total Surr: 4-Brom	nofluorobenzene	2.7 0.94	0.10	1.000 3.000 1.000	0 0	89.3 90.5 93.9	80 80 80	120 120 120			
Xylenes, Total Surr: 4-Brom Sample ID:	LCS-44113	2.7 0.94 SampT	0.10 Type: LC	1.000 3.000 1.000 S	0 0 Tes	89.3 90.5 93.9 tCode: EF	80 80 80 PA Method	120 120	iles		
Xylenes, Total Surr: 4-Brom Sample ID: Client ID:	LCS-44113 LCSS	2.7 0.94 SampT Batcl	0.10 Type: LC n ID: 44 1	1.000 3.000 1.000 S 113	0 0 Tes F	89.3 90.5 93.9 tCode: EF RunNo: 58	80 80 80 PA Method 3955	120 120 120 8021B: Volat			
Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date:	LCS-44113 LCSS	2.7 0.94 SampT Batcl Analysis E	0.10 Type: LC n ID: 44 Date: 4/	1.000 3.000 1.000 S 113 7/2019	0 0 Tes F S	89.3 90.5 93.9 tCode: EF RunNo: 58 SeqNo: 19	80 80 80 89 89 89 89 89 80 80 80 80 80 80 80 80 80 80 80 80 80	120 120 120 8021B: Volat Units: %Red	;		
Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte	LCS-44113 LCSS 4/4/2019	2.7 0.94 SampT Batcl Analysis E Result	0.10 Type: LC n ID: 44 1	1.000 3.000 1.000 S 113 7/2019 SPK value	0 0 Tes F	89.3 90.5 93.9 tCode: EF RunNo: 58 SeqNo: 19 %REC	80 80 PA Method 3955 982925 LowLimit	120 120 8021B: Volat Units: %Rec HighLimit		RPDLimit	Qual
Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte	LCS-44113 LCSS	2.7 0.94 SampT Batcl Analysis E	0.10 Type: LC n ID: 44 Date: 4/	1.000 3.000 1.000 S 113 7/2019	0 0 Tes F S	89.3 90.5 93.9 tCode: EF RunNo: 58 SeqNo: 19	80 80 80 89 89 89 89 89 80 80 80 80 80 80 80 80 80 80 80 80 80	120 120 120 8021B: Volat Units: %Red	;	RPDLimit	Qual
Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte Surr: 4-Brom	LCS-44113 LCSS 4/4/2019	2.7 0.94 SampT Batch Analysis D Result 0.92	0.10 Type: LC n ID: 44 Date: 4/	1.000 3.000 1.000 S 113 7/2019 SPK value 1.000	0 0 Tes F S SPK Ref Val	89.3 90.5 93.9 tCode: EF RunNo: 58 SeqNo: 19 %REC 92.1	80 80 PA Method 3955 982925 LowLimit 80	120 120 8021B: Volat Units: %Rec HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte Surr: 4-Brom	LCS-44113 LCSS 4/4/2019 nofluorobenzene LCS-44114	2.7 0.94 SampT Batcl Analysis D Result 0.92 SampT	0.10 Type: LC n ID: 44 Date: 4/ PQL	1.000 3.000 1.000 S I13 7/2019 SPK value 1.000 S	0 0 Tes SPK Ref Val	89.3 90.5 93.9 tCode: EF RunNo: 58 SeqNo: 19 %REC 92.1	80 80 80 89 89 89 89 89 89 80 80 80 80 80 80 80 80 80 80 80 80 80	120 120 8021B: Volat Units: %Rec HighLimit 120	%RPD	RPDLimit	Qual
Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte Surr: 4-Brom Sample ID:	LCS-44113 LCSS 4/4/2019 nofluorobenzene LCS-44114 LCSS	2.7 0.94 SampT Batcl Analysis D Result 0.92 SampT	0.10 Type: LC n ID: 44 Date: 4/ PQL Type: LC n ID: 44	1.000 3.000 1.000 S 113 7/2019 SPK value 1.000 S S	0 0 Tes SPK Ref Val Tes F	89.3 90.5 93.9 tCode: EF RunNo: 58 SeqNo: 19 %REC 92.1 tCode: EF	80 80 80 89 89 89 89 80 80 80 80 80 80 80 80 80 80 80 80 80	120 120 8021B: Volat Units: %Rec HighLimit 120	%RPD iles	RPDLimit	Qual
Xylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte Surr: 4-Brom Sample ID: Client ID:	LCS-44113 LCSS 4/4/2019 nofluorobenzene LCS-44114 LCSS	2.7 0.94 SampT Batch Analysis D Result 0.92 SampT Batch	0.10 Type: LC n ID: 44 Date: 4/ PQL Type: LC n ID: 44	1.000 3.000 1.000 S 113 7/2019 SPK value 1.000 S 114 7/2019	0 0 Tes SPK Ref Val Tes F	89.3 90.5 93.9 tCode: EF RunNo: 58 SeqNo: 19 tCode: EF RunNo: 58 SeqNo: 19	80 80 80 8955 882925 LowLimit 80 8955 982926	120 120 8021B: Volat Units: %Rec HighLimit 120 8021B: Volat	%RPD iles	RPDLimit	Qual

- E Value above quantitation range
- ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904254**

09-Apr-19

Client:	ENSOLUM							
Project:	Lateral 3A 2							
Sample ID: LCS-44	1114 Samp	pType: LCS	TestCode: E	PA Method	8021B: Volati	les		
Client ID: LCSS	Bat	tch ID: 44114	RunNo:	8955				
Prep Date: 4/4/20	Analysis	Date: 4/7/2019	SeqNo: 1	982926	Units: %Rec			
Analyte	Result	PQL SPK value	e SPK Ref Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobe	enzene 0.89	1.00	89.3	80	120			
Sample ID: MB-44	112 Samp	pType: MBLK	TestCode: E	PA Method	8021B: Volati	les		
Client ID: PBS	Bat	tch ID: 44112	RunNo:	8955				
Prep Date: 4/4/20	019 Analysis	Date: 4/6/2019	SeqNo: 1	982927	Units: mg/Kg	J		
Analyte	Result	PQL SPK value	e 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-Bromofluorobe	enzene 0.95	1.00	95.0	80	120			
Sample ID: MB-44	113 Samı	pType: MBLK	TestCode: E	PA Method	8021B: Volati	les		
Client ID: PBS	Bat	tch ID: 44113	RunNo:	8955				
Prep Date: 4/4/20	Analysis	Date: 4/7/2019	SeqNo: 1	982928	Units: %Rec			
Analyte	Result	PQL SPK value	e SPK Ref Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobe	enzene 0.93	1.00	93.0	80	120			
Sample ID: MB-44	114 Samp	pType: MBLK	TestCode: E	PA Method	8021B: Volati	les		
Client ID: PBS	Bat	tch ID: 44114	RunNo:	8955				
Prep Date: 4/4/20	019 Analysis	Date: 4/7/2019	SeqNo: 1	982929	Units: %Rec			
Analyte	Result	PQL SPK value	e SPK Ref Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobe	enzene 0.90	1.00) 89.9	80	120			

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
 - S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1904254 09-Apr-19

Client: ENSOLU Project: Lateral 3										
Sample ID: Ics-44098	SamoT	ype: LC	s	Tes	tCode: F	PA Method	8260B: Volat	iles Short	list	
Client ID: LCSS		h ID: 44			RunNo: 5					
Prep Date: 4/4/2019	Analysis D	Date: 4/	5/2019	5	SeqNo: 1	982755	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	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.44		0.5000		88.1	70	130			
Surr: Toluene-d8	0.47		0.5000		95.0	70	130			
Sample ID: mb-44098	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8260B: Volat	iles Short	List	
Client ID: PBS	Batch	h ID: 44	098	F	RunNo: 5	8934				
Prep Date: 4/4/2019	Analysis D	Date: 4/	5/2019	S	SeqNo: 1	982756	Units: %Red	;		
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	0.52		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.45		0.5000		89.8	70	130			
Surr: Toluene-d8	0.46		0.5000		93.0	70	130			
Sample ID: Ics-44111	SampT	ype: LC	s	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: LCSS	Batch	h ID: 44	111	F	RunNo: 5	8962				
Prep Date: 4/4/2019	Analysis D	Date: 4/	6/2019	S	SeqNo: 1	983547	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.025	1.000	0	73.1	70	130			
Toluene	0.91	0.050	1.000	0	91.4	70	130			
Ethylbenzene	0.92	0.050	1.000	0	91.8	70	130			
Xylenes, Total	2.8	0.10	3.000	0	94.1	70	130			
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		86.5	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.44		0.5000		89.0	70	130			
Surr: Toluene-d8	0.47		0.5000		94.0	70	130			
Sample ID: mb-44111	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8260B: Volat	iles Short	List	
Client ID: PBS		h ID: 44			RunNo: 5					
Prep Date: 4/4/2019	Analysis D	Date: 4/	6/2019	S	SeqNo: 1	983548	Units: mg/K	g		
				SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte	Result	PQL	SPK value							
	Result ND	PQL 0.025	SPK value	or renter var						
Benzene			SPK value							
Benzene Toluene	ND	0.025	SPK value							
Benzene Toluene Ethylbenzene	ND ND	0.025 0.050	SPK value							
	ND ND ND	0.025 0.050 0.050	0.5000		85.3	70	130			

Qualifiers:

Е Value above quantitation range Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reporting Detection Limit RL Sample container temperature is out of limit as specified at testcode W

PQL Practical Quanitative Limit s

% Recovery outside of range due to dilution or matrix

WO#: **1904254**

09-Apr-19

Client: ENSOL	.UM								
Project: Lateral	3A 2								
Sample ID: mb-44111	SampType	e: MBLK	Test	Code: EP	A Method	8260B: Volati	iles Short	List	
Client ID: PBS	Batch ID): 44111	R	unNo: 58	962				
Prep Date: 4/4/2019	Analysis Date	e: 4/6/2019	S	eqNo: 19	83548	Units: mg/K	g		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.43	0.5000		86.9	70	130			
Surr: Toluene-d8	0.47	0.5000		93.3	70	130			
Sample ID: Ics-44148	I8 SampType: LCS TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch ID): 44148	R	unNo: 58	990				
Prep Date: 4/5/2019	Analysis Date	e: 4/8/2019	S	eqNo: 19	84861	Units: %Rec			
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.44	0.5000		87.6	70	130			
Surr: 4-Bromofluorobenzene	0.52	0.5000		104	70	130			
Surr: Dibromofluoromethane	0.45	0.5000		90.1	70	130			
Surr: Toluene-d8	0.48	0.5000		95.5	70	130			
Sample ID: mb-44148	SampType	e: MBLK	Test	Code: EP	A Method	8260B: Volati	iles Short	List	
Client ID: PBS	Batch ID	D: 44148	R	unNo: 58	990				
Prep Date: 4/5/2019	Analysis Date	e: 4/8/2019	S	eqNo: 19	84862	Units: %Rec			
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.43	0.5000		86.8	70	130			
Surr: 4-Bromofluorobenzene	0.51	0.5000		102	70	130			
Surr: Dibromofluoromethane	0.45	0.5000		90.1	70	130			
Surr: Toluene-d8	0.47	0.5000		93.6	70	130			

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

WO#: 1904254

09-Apr-19

Client: Project:	ENSOLU Lateral 34										
Sample ID:	lcs-44098	SampT	ype: LC	S	Tes	tCode: E	PA Method	8015D Mod: 0	Basoline	Range	
Client ID:	LCSS	Batch	ID: 44	098	F	RunNo: 5	58934				
Prep Date:	4/4/2019	Analysis D	ate: 4/	/5/2019	S	SeqNo: 1	982789	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		500		500.0		100	70	130			
Sample ID:	lcs-44111	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015D Mod: 0	Basoline	Range	
Client ID:	LCSS	Batch	ID: 44	111	F	RunNo: 5	58934				
Prep Date:	4/4/2019	Analysis D	ate: 4	/6/2019	S	SeqNo: 1	982790	Units: mg/Kg	9		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range	Organics (GRO)	21	5.0	25.00	0	82.8	70	130			
Surr: BFB		510		500.0		103	70	130			
Sample ID:	mb-44111	SampT	уре: МІ	BLK	Tes	tCode: E	PA Method	8015D Mod: 0	Basoline	Range	
Client ID:	PBS	Batch	ID: 44	111	F	RunNo: 5	58934				
Prep Date:	4/4/2019	Analysis D	ate: 4	/6/2019	S	SeqNo: 1	982791	Units: mg/Kg	9		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	Organics (GRO)	ND	5.0								
Surr: BFB		520		500.0		105	70	130			
Sample ID:	mb-44098	SampT	уре: М	BLK	Tes	tCode: E	PA Method	8015D Mod: 0	Gasoline	Range	
Client ID:	PBS	Batch	ID: 44	098	F	RunNo: 5	58934				
Prep Date:	4/4/2019	Analysis D	ate: 4	/5/2019	5	SeqNo: 1	982792	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		500		500.0		99.8	70	130			
Sample ID:	lcs-44148	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015D Mod: 0	Sasoline	Range	
Client ID:	LCSS	Batch	ID: 44	148	F	RunNo: 5	58990				
Prep Date:	4/5/2019	Analysis D	ate: 4	/8/2019	5	SeqNo: 1	984917	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		500		500.0		100	70	130			
Sample ID:	mb-44148	SampT	ype: MI	BLK	Tes	tCode: E	PA Method	8015D Mod: 0	Basoline	Range	
Client ID:	PBS	Batch	ID: 44	148	F	RunNo: 5	58990				
Prep Date:	4/5/2019	Analysis D	ate: 4	/8/2019	S	SeqNo: 1	984918	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		510		500.0		102	70	130		,	

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

PQL Practical Quanitative Limit s

% Recovery outside of range due to dilution or matrix

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Alb. TEL: 505-345-3975 Website: www.ha	4901 Hawk uquerque, NM 5 FAX: 505-345	ins NE 87109 Sam 5-4107	ple Log-In C	heck List
Client Name: ENSOLUM AZTEC	Work Order Number	1904254		RcptNo:	1
Received By: Yazmine Garduno	4/4/2019 8:14:00 AM		Azzmin Winderto		
Completed By: Erin Melendrez Reviewed By: LR . 4 4416	4/4/2019 9:23:35 AM UUU		rfozmin lefndurt VL VL	7	
Chain of Custody					
1. Is Chain of Custody complete?		Yes 🗹	No	Not Present	
2. How was the sample delivered?		Courier		2	
Log In 3. Was an attempt made to cool the samples?	2	Yes 🗹	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(5)?	Yes 🗹	No 🗌		
7. Are samples (except VOA and ONG) proper	ly preserved?	Yes 🗹	No 🗌		
8. Was preservative added to bottles?		Yes 🗌	No 🗹	NA 🗌	/
9. VOA vials have zero headspace?		Yes	No 🗌	No VOA Vials 🗹	
10. Were any sample containers received broke	en?	Yes 🗀	No 🗹	# of preserved bottles checked	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	for pH:	>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 🗌	/	19
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:	414119
Special Handling (if applicable)					
15. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗌		
Person Notified:	Date:		and the second		
By Whom:	Via:	eMail	Phone 🗌 Fax	In Person	
Regarding:					
Client Instructions:					
16. Additional remarks:					1.

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			
2	3.1	Good	Yes			

Chain-of-Custody Record	Turn-Around Time:		
Client:	D Standard & Rush W S 110		AALL ENVIKONMENTAL ANALVETE LARODATODV
	(((www hallenvironmental com	
Mailing Address:		4901 Hawkins NE - Albuque	Albuquerque. NM 87109
	Project #: OSA/99 059	10	505-345-4107
Phone #:		Analysis	Request
email or Fax#: KSUNMERS & Ensolution corn	Project Manager: KSummers	(0	(tu
QA/QC Package:		SMS s'8: s'8	IƏSQ
Standard Level 4 (Full Validation)		02II 02I / 03	A\tn
:uo	" RDeechill	1 DF 3082 827	
NELAC Other	On Ice: NYes DNo	20 502 922	
EDD (Type)		(GF stal (GF (GF (GF) (GF)	
	Cooler Temp(including cF): 2.5.3.7	15D etho 8 Me 8 Me	
Dato Timo Matriv Samula Nama	Container Preservative	7560 (V 260 (V 260 (V	270 (S otal Co
	- i ype	С С Е Е 8 7 7	_
< < < < < < < < < < < < < < < < < < < <	1) 142) dr (00) 001		
4/3/19/1140 S FP-3	WYORDar cool -002	XX	X
4/3/19/11US S FP-3	(1) 402 Jar 6001 -003	XX	X
	10 m		
	/		
Date: Time: Relinquished by: 4))19 1414 DATA MC	11 13/19	Remarks: PM-TUM	n Leng
1810	MUD COULER HIGH & SIM		
recessary, samples submitted to Hall Env	bcontracted to other accredited laboratories. This serves as notice	f this possibility. Any sub-contracted data will be clearly	notated on the analytical report.



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

May 01, 2019

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

OrderNo.: 1904C93

RE: Lateral 3A 2

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 7 sample(s) on 4/26/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> 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

Date Reported: 5/1/2019

CLIENT: ENSOLUM	Client Sample ID: FP-4 Collection Date: 4/25/2019 1:00:00 PM								
Project: Lateral 3A 2									
Lab ID: 1904C93-001	Matrix: SOIL		Recei	ved Dat	e: 4/2	26/2019 8:15:00 AM			
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS						Analyst	smb		
Chloride	ND	60		mg/Kg	20	4/28/2019 1:01:22 PM	44582		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	TOM		
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/30/2019 10:45:09 AM	44584		
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/30/2019 10:45:09 AM	44584		
Surr: DNOP	153	70-130	S	%Rec	1	4/30/2019 10:45:09 AM	44584		
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB		
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2019 12:03:19 PM	44568		
Surr: BFB	91.1	73.8-119		%Rec	1	4/28/2019 12:03:19 PM	44568		
EPA METHOD 8021B: VOLATILES						Analyst	NSB		
Benzene	ND	0.024		mg/Kg	1	4/28/2019 12:03:19 PM	44568		
Toluene	ND	0.048		mg/Kg	1	4/28/2019 12:03:19 PM	44568		
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2019 12:03:19 PM	44568		
Xylenes, Total	ND	0.097		mg/Kg	1	4/28/2019 12:03:19 PM	44568		
Surr: 4-Bromofluorobenzene	89.6	80-120		%Rec	1	4/28/2019 12:03:19 PM	44568		

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 exceededND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In RangeRL Reporting Limit
- Page 1 of 13

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: EP-5

CLIENT:ENSOLUMProject:Lateral 3A 2Lab ID:1904C93-002	Client Sample ID: FP-5 Collection Date: 4/25/2019 1:05:00 PM Matrix: SOIL Received Date: 4/26/2019 8:15:00 AM								
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS						Analyst	: smb		
Chloride	ND	59		mg/Kg	20	4/28/2019 1:38:37 PM	44582		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	том		
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/30/2019 11:07:22 AM	44584		
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/30/2019 11:07:22 AM	44584		
Surr: DNOP	156	70-130	S	%Rec	1	4/30/2019 11:07:22 AM	44584		
EPA METHOD 8015D: GASOLINE RANG	E					Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2019 1:13:53 PM	44568		
Surr: BFB	89.2	73.8-119		%Rec	1	4/28/2019 1:13:53 PM	44568		
EPA METHOD 8021B: VOLATILES						Analyst	: NSB		
Benzene	ND	0.024		mg/Kg	1	4/28/2019 1:13:53 PM	44568		
Toluene	ND	0.049		mg/Kg	1	4/28/2019 1:13:53 PM	44568		
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2019 1:13:53 PM	44568		
Xylenes, Total	ND	0.097		mg/Kg	1	4/28/2019 1:13:53 PM	44568		
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	4/28/2019 1:13:53 PM	44568		

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 2 of 13

Date Reported: 5/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Project: Lateral 3A 2

Client Sample ID: FP-6 Collection Date: 4/25/2019 1:10:00 PM

Lab ID: 1904C93-003	Matrix: SOIL		Received Date: 4/26/2019 8:15:00 AM							
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	: smb				
Chloride	ND	60	mg/Kg	20	4/28/2019 1:51:01 PM	44582				
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analyst	: JME				
Diesel Range Organics (DRO)	23	10	mg/Kg	1	4/30/2019 12:58:27 PM	44584				
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/30/2019 12:58:27 PM	44584				
Surr: DNOP	123	70-130	%Rec	1	4/30/2019 12:58:27 PM	44584				
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB				
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/28/2019 1:37:22 PM	44568				
Surr: BFB	97.0	73.8-119	%Rec	1	4/28/2019 1:37:22 PM	44568				
EPA METHOD 8021B: VOLATILES					Analyst	: NSB				
Benzene	ND	0.025	mg/Kg	1	4/28/2019 1:37:22 PM	44568				
Toluene	ND	0.050	mg/Kg	1	4/28/2019 1:37:22 PM	44568				
Ethylbenzene	ND	0.050	mg/Kg	1	4/28/2019 1:37:22 PM	44568				
Xylenes, Total	ND	0.10	mg/Kg	1	4/28/2019 1:37:22 PM	44568				
Surr: 4-Bromofluorobenzene	90.3	80-120	%Rec	1	4/28/2019 1:37:22 PM	44568				

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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Date Reported: 5/1/2019

•	U ,				Ĩ			
CLIENT: ENSOLUM		Cl	ient Sample II	D: FP	2-7			
Project: Lateral 3A 2		(Collection Dat	e: 4/2	25/2019 1:15:00 PM			
Lab ID: 1904C93-004	Matrix: SOIL Received Date: 4/26/2019 8:15:00 AM							
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	smb		
Chloride	ND	60	mg/Kg	20	4/28/2019 2:03:25 PM	44582		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	том		
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/30/2019 11:51:43 AM	44584		
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/30/2019 11:51:43 AM	44584		
Surr: DNOP	128	70-130	%Rec	1	4/30/2019 11:51:43 AM	44584		
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB		
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/28/2019 2:00:44 PM	44568		
Surr: BFB	91.4	73.8-119	%Rec	1	4/28/2019 2:00:44 PM	44568		

Hall Environmental Analysis Laboratory, Inc.

91.4	73.8-119	%Rec	1	4/28/2019 2:00:44 PM	44568
				Analyst:	NSB
ND	0.025	mg/Kg	1	4/28/2019 2:00:44 PM	44568
ND	0.050	mg/Kg	1	4/28/2019 2:00:44 PM	44568
ND	0.050	mg/Kg	1	4/28/2019 2:00:44 PM	44568
ND	0.099	mg/Kg	1	4/28/2019 2:00:44 PM	44568
89.9	80-120	%Rec	1	4/28/2019 2:00:44 PM	44568
	ND ND ND	ND 0.025 ND 0.050 ND 0.050 ND 0.099	91.4 73.8-119 %Rec ND 0.025 mg/Kg ND 0.050 mg/Kg ND 0.050 mg/Kg ND 0.099 mg/Kg	91.4 73.8-119 %Rec 1 ND 0.025 mg/Kg 1 ND 0.050 mg/Kg 1 ND 0.050 mg/Kg 1 ND 0.099 mg/Kg 1	91.4 73.8-119 %Rec 1 4/28/2019 2:00:44 PM Analyst: ND 0.025 mg/Kg 1 4/28/2019 2:00:44 PM ND 0.050 mg/Kg 1 4/28/2019 2:00:44 PM ND 0.050 mg/Kg 1 4/28/2019 2:00:44 PM ND 0.050 mg/Kg 1 4/28/2019 2:00:44 PM ND 0.099 mg/Kg 1 4/28/2019 2:00:44 PM

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.

Date Reported: 5/1/2019

CLIENT:ENSOLUMProject:Lateral 3A 2	Client Sample ID: FP-8 Collection Date: 4/25/2019 1:20:00 PM Matrix: SOIL Received Date: 4/26/2019 8:15:00 AM									
Lab ID: 1904C93-005	Matrix: SOIL		Received Dat	e: 4/2	26/2019 8:15:00 AM					
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	smb				
Chloride	ND	60	mg/Kg	20	4/28/2019 2:40:39 PM	44582				
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	JME				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/30/2019 10:55:19 AM	44584				
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/30/2019 10:55:19 AM	44584				
Surr: DNOP	82.5	70-130	%Rec	1	4/30/2019 10:55:19 AM	44584				
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst	NSB				
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/28/2019 2:24:21 PM	44568				
Surr: BFB	88.1	73.8-119	%Rec	1	4/28/2019 2:24:21 PM	44568				
EPA METHOD 8021B: VOLATILES					Analyst	NSB				
Benzene	ND	0.024	mg/Kg	1	4/28/2019 2:24:21 PM	44568				
Toluene	ND	0.049	mg/Kg	1	4/28/2019 2:24:21 PM	44568				
Ethylbenzene	ND	0.049	mg/Kg	1	4/28/2019 2:24:21 PM	44568				
Xylenes, Total	ND	0.097	mg/Kg	1	4/28/2019 2:24:21 PM	44568				
Surr: 4-Bromofluorobenzene	86.3	80-120	%Rec	1	4/28/2019 2:24:21 PM	44568				

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.

Date Reported: 5/1/2019

CLIENT: ENSOLUM Project: Lateral 3A 2	Client Sample ID: FP-9 Collection Date: 4/25/2019 1:25:00 PM									
Lab ID: 1904C93-006	Matrix: SOIL Received Date: 4/26/2019 8:15:00 AM									
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	smb				
Chloride	ND	60	mg/Kg	20	4/28/2019 2:53:04 PM	44582				
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	JME				
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/30/2019 11:19:44 AM	44584				
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/30/2019 11:19:44 AM	44584				
Surr: DNOP	73.3	70-130	%Rec	1	4/30/2019 11:19:44 AM	44584				
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst	NSB				
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/28/2019 3:34:47 PM	44568				
Surr: BFB	90.4	73.8-119	%Rec	1	4/28/2019 3:34:47 PM	44568				
EPA METHOD 8021B: VOLATILES					Analyst	NSB				
Benzene	ND	0.024	mg/Kg	1	4/28/2019 3:34:47 PM	44568				
Toluene	ND	0.048	mg/Kg	1	4/28/2019 3:34:47 PM	44568				
Ethylbenzene	ND	0.048	mg/Kg	1	4/28/2019 3:34:47 PM	44568				
Xylenes, Total	ND	0.097	mg/Kg	1	4/28/2019 3:34:47 PM	44568				
Surr: 4-Bromofluorobenzene	88.3	80-120	%Rec	1	4/28/2019 3:34:47 PM	44568				

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.

CLIENT: ENSOLUM

Date Reported: 5/1/2019
Client Sample ID: FP-10

Project:	Lateral 3A 2		(Collection Dat	e: 4/2	25/2019 1:30:00 PM					
Lab ID:	1904C93-007	Matrix: SOIL		Received Dat	e: 4/2	26/2019 8:15:00 AM					
Analyses		Result	RL	Qual Units	DF	Date Analyzed	Batch				
EPA MET	THOD 300.0: ANIONS					Analysi	t: smb				
Chloride		ND	60	mg/Kg	20	4/28/2019 3:05:28 PM	44582				
EPA MET	THOD 8015M/D: DIESEL R	ANGE ORGANICS				Analyst	t: JME				
Diesel R	ange Organics (DRO)	ND	9.9	mg/Kg	1	4/30/2019 11:44:01 AN	1 44584				
Motor Oi	I Range Organics (MRO)	ND	50	mg/Kg	1	4/30/2019 11:44:01 AN	1 44584				
Surr: I	DNOP	81.0	70-130	%Rec	1	4/30/2019 11:44:01 AN	1 44584				
EPA MET	THOD 8015D: GASOLINE	RANGE				Analyst	: NSB				
Gasoline	e Range Organics (GRO)	ND	4.8	mg/Kg	1	4/29/2019 2:08:16 AM	44576				
Surr: I	BFB	88.6	73.8-119	%Rec	1	4/29/2019 2:08:16 AM	44576				
EPA MET	THOD 8021B: VOLATILES					Analyst	t: NSB				
Benzene)	ND	0.024	mg/Kg	1	4/29/2019 2:08:16 AM	44576				
Toluene		ND	0.048	mg/Kg	1	4/29/2019 2:08:16 AM	44576				
Ethylben	izene	ND	0.048	mg/Kg	1	4/29/2019 2:08:16 AM	44576				
Xylenes,	Total	ND	0.096	mg/Kg	1	4/29/2019 2:08:16 AM	44576				
Surr: 4	4-Bromofluorobenzene	87.0	80-120	%Rec	1	4/29/2019 2:08:16 AM	44576				

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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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

ENSOLUM

Project: Lateral	3A 2			
Sample ID: MB-44582	SampType: MBLK	TestCode: EPA Method		
Client ID: PBS	Batch ID: 44582	RunNo: 59494		
Prep Date: 4/28/2019	Analysis Date: 4/28/2019	SeqNo: 2004472	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID: LCS-44582	SampType: LCS	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 44582	RunNo: 59494		
Prep Date: 4/28/2019	Analysis Date: 4/28/2019	SeqNo: 2004473	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 93.5 90	110	

Qualifiers:

Client:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
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- 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

Client:ENSOLUProject:Lateral 3.										
Sample ID: LCS-44584	SampT	/pe: LC	S	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: LCSS		ID: 44		RunNo: 59489						
Prep Date: 4/29/2019	Analysis D	ate: 4/	30/2019	S	SeqNo: 2	005373	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	52 5.0	10	50.00 5.000	0	104 101	63.9 70	124 130			
Sample ID: MB-44584	SampT	/pe: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: PBS	Batch ID: 44584				RunNo: 5			Ū	U	
Prep Date: 4/29/2019	Analysis D	ate: 4/	30/2019	S	SeqNo: 2	005374	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10					J			
Motor Oil Range Organics (MRO)	ND	50	10.00		105	70	100			0
Surr: DNOP	14		10.00		135	70	130			S
Sample ID: 1904C93-001AMS	SampT	/pe: MS	6	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: FP-4	Batch	ID: 44	584	F	RunNo: 59489					
Prep Date: 4/29/2019	Analysis Da	ate: 4/	30/2019	5	SeqNo: 2	005589	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	64 5.5	9.9	49.65 4.965	0	129 111	53.5	126			S
	5.5		4.900		111	70	130			
Sample ID: 1904C93-001AMS	D SampT	/pe: MS	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: FP-4		ID: 44			RunNo: 5					
Prep Date: 4/29/2019	Analysis Da	ate: 4/	30/2019	S	SeqNo: 2	005590	Units: mg/k	٢g		
Analyte	Result	PQL		SPK Ref Val		LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	52 4.6	9.8	49.16 4.916	0	107 94.2	53.5 70	126 130	19.5 0	21.7 0	
	4.0		4.910		34.2	70	150	0	0	
Sample ID: MB-44585	SampT	•					8015M/D: Die	esel Range	e Organics	
Client ID: PBS		ID: 44			RunNo: 5					
Prep Date: 4/29/2019	Analysis Da	ate: 4/	30/2019	5	SeqNo: 2	005592	Units: %Re	C		
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	13		10.00		126	70	130			
Sample ID: LCS-44585	Samati	/pe: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Sampr									
2000		ID: 44	585	F	RunNo: 5	9489				
Prep Date: 4/29/2019		ID: 44			RunNo: 5 SeqNo: 2		Units: %Re	c		

Qualifiers:

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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
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

Client: Project:	ENSOI Lateral	-									
Sample ID: LC	CS-44585	SampT	ype: LC	CS	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS Batch ID: 44585				F	RunNo: 5	9489					
Prep Date: 4/29/2019		Analysis D	Analysis Date: 4/30/2019			SeqNo: 2005598			Units: %Rec		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		5.6		5.000		111	70	130			

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- 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 Value above quantitation range Analyte detected below quantitation limits
- Е
- J
- Р Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	1904C93
	01-May-19

Client: ENSOL	-										
Project: Lateral 3	3A 2										
Sample ID: MB-44568	SampType: MBLI	к	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 44568	8	R	unNo: 5 9	480						
Prep Date: 4/26/2019	Analysis Date: 4/28	/2019	S	eqNo: 20	03986	Units: mg/K	g				
Analyte	Result PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 900	1000		90.0	73.8	119					
Sample ID: LCS-44568	SampType: LCS		Test	Code: EF	A Method	8015D: Gaso	line Rang	e			
Client ID: LCSS	Batch ID: 44568	8	R	RunNo: 59480							
Prep Date: 4/26/2019	Analysis Date: 4/28	/2019	S	SeqNo: 2003987 Units				ı/Kg			
Analyte	Result PQL S	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	24 5.0	25.00	0	95.5	80.1	123					
Surr: BFB	1000	1000		101	73.8	119					
Sample ID: MB-44576	SampType: MBLI	к	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 4457	6	RunNo: 59480								
Prep Date: 4/26/2019	Analysis Date: 4/28	/2019	S	eqNo: 20	04012	Units: mg/K	g				
Analyte	Result PQL S	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	ND 5.0										
Surr: BFB	920	1000		92.1	73.8	119					
Sample ID: LCS-44576	SampType: LCS		Test	Code: EF	A Method	8015D: Gaso	line Rang	e			
Client ID: LCSS	Batch ID: 4457	6	R	unNo: 59	480						
Prep Date: 4/26/2019	Analysis Date: 4/28	/2019	S	eqNo: 20	04013	Units: mg/K	g				
Analyte	Result PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	22 5.0	25.00	0	89.6	80.1	123					
Surr: BFB	1000	1000		103	73.8	119					

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- % Recovery outside of range due to dilution or matrix S

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

Hall En	vironmenta	al Anal	vsic I	ahorat	orv. Inc						01 14
Client: Project:	ENSOLU Lateral 3.	JM	y 616 L	2450140							01-May-
Sample ID:			Гуре: МЕ	3LK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:			h ID: 44			RunNo: 5		002121 7010			
	-					-					
Prep Date:	4/26/2019	Analysis [Date: 4/	28/2019	3	SeqNo: 2	004042	Units: mg/h	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
oluene		ND	0.050								
thylbenzene		ND	0.050								
(ylenes, Total		ND	0.10								
Surr: 4-Brom	ofluorobenzene	0.88		1.000		88.2	80	120			
Sample ID:	LCS-44568	Samp	Гуре: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batc	h ID: 44	568	F	RunNo: 5	9480				
Prep Date:	4/26/2019	Analysis [Date: 4/	28/2019	5	SeqNo: 2	004043	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
lenzene		0.94	0.025	1.000	0	93.8	80	120			
oluene		0.96	0.050	1.000	0	95.8	80	120			
thylbenzene		0.96	0.050	1.000	0	95.5	80	120			
(ylenes, Total		2.9	0.10	3.000	0	96.1	80	120			
Surr: 4-Brom	ofluorobenzene	0.91		1.000		91.4	80	120			
Sample ID:	1904C93-001AMS	Samp	Гуре: МS	6	Tes	tCode: El	PA Method	8021B: Vola	tiles		
			Гуре: М \$ h ID: 44			tCode: El RunNo: 5		8021B: Vola	tiles		
Client ID:			h ID: 44	568	F		9480	8021B: Vola Units: mg/ł			
Client ID: Prep Date:	FP-4	Batc	h ID: 44	568 28/2019	F	RunNo: 5	9480			RPDLimit	Qual
Client ID: Prep Date: Analyte	FP-4	Batc Analysis [h ID: 44 Date: 4/	568 28/2019	F	RunNo: 5 SeqNo: 2	9480 004045	Units: mg/ł	(g	RPDLimit	Qual
Client ID: Prep Date: Analyte Benzene	FP-4	Batc Analysis I Result	h ID: 44 Date: 4/ PQL	568 28/2019 SPK value	F S SPK Ref Val	RunNo: 5 SeqNo: 2 %REC	9480 004045 LowLimit	Units: mg/F HighLimit	(g	RPDLimit	Qual
Client ID: Prep Date: Analyte Benzene oluene	FP-4	Batc Analysis I Result 0.89	h ID: 44 Date: 4/ PQL 0.024	568 28/2019 SPK value 0.9794	F SPK Ref Val 0	RunNo: 5 SeqNo: 2 <u>%REC</u> 91.4	9480 004045 LowLimit 63.9	Units: mg/k HighLimit 127	(g	RPDLimit	Qual
Client ID: Prep Date: Analyte Benzene Foluene thylbenzene	FP-4	Batc Analysis I Result 0.89 0.93	h ID: 44 Date: 4/ PQL 0.024 0.049	568 28/2019 SPK value 0.9794 0.9794	F SPK Ref Val 0 0.01075	RunNo: 5 SeqNo: 2 <u>%REC</u> 91.4 93.8	9480 004045 LowLimit 63.9 69.9	Units: mg/k HighLimit 127 131	(g	RPDLimit	Qual
Client ID: Prep Date: Analyte enzene oluene thylbenzene iylenes, Total	FP-4	Batc Analysis I Result 0.89 0.93 0.94	h ID: 44 Date: 4/ PQL 0.024 0.049 0.049	568 28/2019 SPK value 0.9794 0.9794 0.9794	F SPK Ref Val 0 0.01075 0	RunNo: 5 SeqNo: 2 <u>%REC</u> 91.4 93.8 95.5	9480 004045 LowLimit 63.9 69.9 71	Units: mg/k HighLimit 127 131 132	(g	RPDLimit	Qual
Client ID: Prep Date: Analyte Benzene oluene thylbenzene (ylenes, Total Surr: 4-Brom	FP-4 4/26/2019	Batc Analysis I Result 0.89 0.93 0.94 2.8 0.91	h ID: 44 Date: 4/ PQL 0.024 0.049 0.049	568 28/2019 SPK value 0.9794 0.9794 2.938 0.9794	F SPK Ref Val 0 0.01075 0 0 0	RunNo: 5 SeqNo: 2 %REC 91.4 93.8 95.5 95.6 92.9	9480 004045 LowLimit 63.9 69.9 71 71.8 80	Units: mg/k HighLimit 127 131 132 131	(g %RPD	RPDLimit	Qual
Client ID: Prep Date: Analyte Jenzene Joluene Hylbenzene Surr: 4-Brom Sample ID:	FP-4 4/26/2019 nofluorobenzene 1904C93-001AMS	Batc Analysis I 0.89 0.93 0.94 2.8 0.91 D Samp	h ID: 44 Date: 4/ PQL 0.024 0.049 0.049 0.098	568 28/2019 SPK value 0.9794 0.9794 2.938 0.9794 5D	F SPK Ref Val 0 0.01075 0 0 0 Tes	RunNo: 5 SeqNo: 2 %REC 91.4 93.8 95.5 95.6 92.9	9480 004045 LowLimit 63.9 69.9 71 71.8 80 PA Method	Units: mg/k HighLimit 127 131 132 131 120	(g %RPD	RPDLimit	Qual
Client ID: Prep Date: Analyte enzene oluene thylbenzene (ylenes, Total Surr: 4-Brom Sample ID: Client ID:	FP-4 4/26/2019 nofluorobenzene 1904C93-001AMS	Batc Analysis I 0.89 0.93 0.94 2.8 0.91 D Samp	h ID: 44: Date: 4/ PQL 0.024 0.049 0.049 0.049 0.098 Fype: MS h ID: 44:	568 28/2019 0.9794 0.9794 0.9794 2.938 0.9794 50 568	F SPK Ref Val 0 0.01075 0 0 0 Tes F	RunNo: 5 SeqNo: 2 %REC 91.4 93.8 95.5 95.6 92.9 tCode: El	9480 004045 LowLimit 63.9 69.9 71 71.8 80 PA Method 9480	Units: mg/k HighLimit 127 131 132 131 120	Kg %RPD	RPDLimit	Qual
Client ID: Prep Date: Analyte enzene oluene (thylbenzene (ylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date:	FP-4 4/26/2019 ofluorobenzene 1904C93-001AMS FP-4	Batc Analysis I 0.89 0.93 0.94 2.8 0.91 D Samp Batc	h ID: 44: Date: 4/ PQL 0.024 0.049 0.049 0.049 0.098 Fype: MS h ID: 44:	568 28/2019 0.9794 0.9794 0.9794 2.938 0.9794 50 568 28/2019	F SPK Ref Val 0 0.01075 0 0 0 Tes F	RunNo: 5 SeqNo: 2 %REC 91.4 93.8 95.5 95.6 92.9 tCode: El	9480 004045 LowLimit 63.9 69.9 71 71.8 80 PA Method 9480	Units: mg/k HighLimit 127 131 132 131 120 8021B: Vola	Kg %RPD	RPDLimit	Qual
Client ID: Prep Date: Analyte Benzene oluene thylbenzene (ylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte	FP-4 4/26/2019 ofluorobenzene 1904C93-001AMS FP-4	Batc Analysis I 0.89 0.93 0.94 2.8 0.91 D Samp Batc Analysis I	h ID: 44: Date: 4/ PQL 0.024 0.049 0.049 0.049 0.049 0.098 Fype: MS h ID: 44: Date: 4/	568 28/2019 0.9794 0.9794 0.9794 2.938 0.9794 50 568 28/2019	F SPK Ref Val 0 0.01075 0 0 0 Tes F	RunNo: 5 SeqNo: 2 %REC 91.4 93.8 95.5 95.6 92.9 tCode: El RunNo: 5 SeqNo: 2	9480 004045 LowLimit 63.9 69.9 71 71.8 80 PA Method 9480 004046	Units: mg/k HighLimit 127 131 132 131 120 8021B: Vola Units: mg/k	Kg %RPD tiles		
Client ID: Prep Date: Analyte Benzene oluene thylbenzene (ylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte Benzene	FP-4 4/26/2019 ofluorobenzene 1904C93-001AMS FP-4	Batc Analysis I 0.89 0.93 0.94 2.8 0.91 D Samp Batc Analysis I Result	h ID: 44: Date: 4/ PQL 0.024 0.049 0.049 0.049 0.098 Fype: MS h ID: 44: Date: 4/ PQL	568 28/2019 0.9794 0.9794 0.9794 2.938 0.9794 50 568 28/2019 SPK value	F SPK Ref Val 0 0.01075 0 0 0 Tes F SPK Ref Val	RunNo: 5 SeqNo: 2 %REC 91.4 93.8 95.5 95.6 92.9 tCode: El RunNo: 5 SeqNo: 2 %REC	9480 004045 LowLimit 63.9 69.9 71 71.8 80 PA Method 9480 004046 LowLimit	Units: mg// HighLimit 127 131 132 131 120 8021B: Vola Units: mg// HighLimit	Kg %RPD tilles Kg %RPD	RPDLimit	
Client ID: Prep Date: Analyte Benzene oluene thylbenzene (ylenes, Total Surr: 4-Brom Sample ID: Client ID: Prep Date: Analyte Benzene oluene	FP-4 4/26/2019 ofluorobenzene 1904C93-001AMS FP-4	Batc Analysis I 0.89 0.93 0.94 2.8 0.91 D Samp Batc Analysis I Result 0.93	h ID: 44: Date: 4/ PQL 0.024 0.049 0.049 0.098 Type: MS h ID: 44: Date: 4/ PQL 0.025	568 28/2019 2.9794 0.9794 0.9794 2.938 0.9794 505 568 28/2019 SPK value 0.9921	F SPK Ref Val 0 0.01075 0 0 0 Tes F SPK Ref Val 0	RunNo: 5 SeqNo: 2 %REC 91.4 93.8 95.5 95.6 92.9 tCode: El RunNo: 5 SeqNo: 2 %REC 93.7	9480 004045 LowLimit 63.9 69.9 71 71.8 80 PA Method 9480 004046 LowLimit 63.9	Units: mg// HighLimit 127 131 132 131 120 8021B: Vola Units: mg// HighLimit 127	(g %RPD tiles (g %RPD 3.79	RPDLimit 20	
Client ID: Prep Date: Analyte Benzene oluene thylbenzene (ylenes, Total Surr: 4-Brom	FP-4 4/26/2019 ofluorobenzene 1904C93-001AMS FP-4	Batc Analysis I 0.89 0.93 0.94 2.8 0.91 D Samp Batc Analysis I Result 0.93 0.96	h ID: 44: Date: 4/ PQL 0.024 0.049 0.049 0.098 Type: MS h ID: 44: Date: 4/ PQL 0.025 0.050	568 28/2019 0.9794 0.9794 0.9794 2.938 0.9794 568 568 28/2019 SPK value 0.9921 0.9921	F SPK Ref Val 0 0.01075 0 0 Tes 5 SPK Ref Val 0 0.01075	RunNo: 5 SeqNo: 2 %REC 91.4 93.8 95.5 95.6 92.9 tCode: El RunNo: 5 SeqNo: 2 %REC 93.7 95.6	9480 004045 LowLimit 63.9 69.9 71 71.8 80 PA Method 9480 004046 LowLimit 63.9 69.9	Units: mg/k HighLimit 127 131 132 131 120 8021B: Vola 8021B: Vola Units: mg/k HighLimit 127 131	(g %RPD tiles (g %RPD 3.79 3.16	RPDLimit 20 20	

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded

QC SUMMARY REPORT

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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QC SUMM Hall Environ	WO#:	1904 01-Ma								
	ENSOLUM Lateral 3A 2									
Sample ID: MB-4457	Tes	tCode: El	PA Method	8021B: Volat	iles					
Client ID: PBS	Ba	atch ID: 4	44576	RunNo: 59480						
Prep Date: 4/26/201	9 Analysi	s Date:	4/28/2019	S	SeqNo: 2	004052	Units: mg/K	g		
Analyte	Result	t PQL	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.02	25							
Toluene	ND	0.05	60							
Ethylbenzene	ND	0.05	60							
Xylenes, Total	ND	0.1	0							
Surr: 4-Bromofluorobenze	ene 0.90)	1.000		90.3	80	120			

Sample ID: LCS-44576	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batcl	n ID: 44	576	F	RunNo: 5	9480				
Prep Date: 4/26/2019	Analysis D	Date: 4/	28/2019	5	SeqNo: 2	004053	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.9	80	120			
Toluene	0.95	0.050	1.000	0	95.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.8	80	120			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.4	80	120			

- * Value exceeds Maximum Contaminant Level.
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- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
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- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
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HALL ENVIRONMENTAL ANALYSIS LABORATORY			TE	II Environmen A L: 505-345-35 Website: www	490 Albuquerq 275 FAX:	01 Hawkii nue, NM 8 505-345	ns NE 87109 Se -4107	Sample Log-In Check List							
Client Nan	ne: ENSOLU	JM AZTEC	Work	Order Numb	er: 190	4C93		RcptN	5 1						
Received I	By: Anne Ti	horne	4/26/20	19 8:15:00 A	M		are 2	han							
	By: Erin Me By: ENP DAD 4/		4/26/20 4/726	19 8:56:13 A D/19	M		Arra 2 ULU	6							
Chain of		120/19													
	of Custody con	nnlete?			Vac	~	No	Not Present							
	s the sample de	22.2428.2610			Cou										
Log In 3. Was an	atlempt made to	o cool the samp	pies?		Yes	V	No 🗆								
4. Were all	samples receiv	ed at a tempera	ature of >0° C i	to 6.0°C	Yes	•	No 🗌) NA 🗆							
5. Sample(s) in proper con	tainer(s)?			Yes	>	No 🗆	1							
6. Sufficient	sample volume	e for indicated t	est(s)?		Yes		No 🗌								
7, Are samp	oles (except VO	A and ONG) pr	operly preserve	d?	Yes	~	No 🗌								
8. Was pres	ervative added	to bottles?			Yes		No 🗹	NA 🗌							
	s have zero hea				Yes		No 🗆	No VOA Vials 🗸							
10, Were an	y sample contai	iners received l	broken?		Yes		No 🗹	# of preserved bottles checked							
	erwork match b crepancies on c		r)		Yes	\checkmark	No 🗌	for pH:	r>12 unless noted)						
	ces correctly ide		202 marine and a second second		Yes	\checkmark	No 🗌	Adjusted?							
	what analyses	the second se	1?		Yes		No	- / -							
	holding times at ify customer for)		Yes	~	No 🗌	Checked by: "	DAD 4/26/19						
Special Ha	ndling (if ap	oplicable)													
	nt notified of all		with this order?		Yes		No []	NA 🗹							
Pe	rson Notified:	-		Date:				-							
Ву	By Whom:			Via:			Phone 🗌 Fa	x 🗌 In Person							
	garding: ent Instructions:														
16. Addition	al remarks:								1						
17. <u>Cooler I</u>	nformation		1			contraction in the									
Coole	r No Temp % 1.9	C Condition Good	Seal Intact Yes	Seal No	Seal Da	ate	Signed By								
2	3.9	Good	Yes												

Jy Record Turn-Around Time: D.O.U. D.O.U. D.O.U. 4136 4136 4136 4136 4136 Standard 8 Rush 5 Arthol D.M. ANALYSIS I AROBATORY	Project Name: Lotteral 34-2	4901 Hawki	Project #: OSAIDA (DOST	Project Manager: KSummers	ьО ^{4'} (SWISC SW	Sampler: RDecchilly RB 4.1)	090 (296 00 01 10 01 203, 203, 203, 203, 203, 203, 203, 203,	Pointiniting Chi, Voc, V, V, W, Mediana Chi, Voc, V, V, Voc, V, Voc, Voc, Voc, Voc,	Image: Noncontainer Preservative HEAL No. 4 806 60		FP-S 1412 Jur Cool -002 Kx X 1	FP-6 1402 Jur Cool -003 x x 1 1 1 X	FP-7 1 402 Jar 2001 - 004 X X X	FP-8 11402 Jar Cool -005 XX	FP-9 1402 Jar Cool - ODLO KX 1 1 1 1	FP-10 1402 Jar cari - 007 × × × × ×			M Received by: Via: Date Time Remarks: PM-TOM LONG (EP 2010) Muct Warld Worling (330 Parkey - REZIACO	(Via) Date Time 3 04/20/19 SHAE DAY
stody Record		Rio brando Suite A			Level 4 (Full Validation)		On Ice: # of Cooler	Cooler Ten	Container Sample Name Type and #		1412 Ja	1 402		1402	1 Hor		N KS		A.	Wall*
Chain-of-Cus		Mailing Address: 606 5, Rio formulo Suite A	Phone #:	email or Fax#: KSUMMPES@ PNSOlum 10M	QA/QC Package:	:u	D EDD (Tvpe)		Date Time Matrix 8	Washy 1300 S	4/25/19/13.05 S	4/25/19/ 1310 S	4 Astlif 1315 5	4/25/19 1320 S	4 as 19 1325 5	"25/19/230 S			17 1330	Plate: Time: Relinquished by: