#### Received by OCD: 8/10/2020 9:14:27 AM

District II
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Page 1 of 71

Incident ID	
District RP	
Facility ID	
Application ID	

Volume/Weight Recovered (provide units)

#### **Release Notification**

#### Responsible Party

			Respo	monore I al t	y				
Responsible	Party: Ente	erprise Field Ser	vices, LLC	OGRID: 1	151618				
Contact Nan	ne: <b>Thoma</b> :	s Long		Contact T	elephone: <b>505-599-2</b>	286			
Contact ema	il: <b>tjlong@e</b>	prod.com		Incident #	(assigned by OCD): NCS	S1935249968			
Contact mail	ing address	614 Reilly Ave,	Farmington, NM						
			Location o	f Release S	ource				
Latitude 36.3	78303		Longitude -10	07.616105	(NAD 83 in de	ecimal degrees to 5 decimal places)			
Site Name La	teral 2C-5	5		Site Type I	Natural Gas Gathe	ring Pipeline			
Date Release Discovered: 11/9/2019				Serial Nun	Serial Number (if applicable): NM 032322				
Unit Letter	Section	Township	Range	Cour	ntv				
C	30	25N	7 W	Rio Ar					
Surface Owner			ibal Private (Na.	Volume of 1	Release	)			
Crude Oil	·	Volume Release		iculations of specific	Volume Recovered				
Produced Water Volume Released (bbls)					Volume Recovered (bbls)				
		Is the concentrate produced water >	ion of dissolved chlo >10,000 mg/l?	oride in the	Yes No				
Condensa	te		d (bbls): 15-20 BBL	.s	Volume Recovered	(bbls): None			
Natural G	as	Volume Release	d (Mcf): < 1.0 MCF		Volume Recovered	(Mcf): None			

Cause of Release: On November 9, 2019, Enterprise discovered a release of natural gas and condensate from the Lateral 2C-55 pipeline valve. An area of approximately six feet in diameter was impacted by the released fluids. No washes were affected. The pipeline was isolated, depressurized, locked and tagged out. Enterprise began remediation on November 14, 2019 and determined the release reportable per NMOCD regulation, due to the volume of impacted subsurface soil. Remediation was completed on December 13, 2019. The final excavation dimensions measured approximately 35 feet long by 28 feet wide by approximately 18.5 feet deep. Approximately 1,188 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. Surface reclamation was not completed until the Spring of 2020, due to the Bureau Land Management winter closure requirement. A third party closure report is included with this "Final." C-141.

Volume/Weight Released (provide units):

Released to Imaging: 7/16/2021 10:34:36 AM

Other (describe)

Received by OCD:	8/10/2020 9:	14:27 AMState of New Mexico
Page 2		Oil Conservation Division

Incident ID	Page 2 of 71
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	ing 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									
and regulations all operators are required to report and/or file comay endanger public health or the environment. The acceptance should their operations have failed to adequately investigate and human health or the environment. In addition, OCD acceptance compliance with any other federal, state, or local laws and/or re	•								
OCD Only									
Received by:	Date:								
Closure approval by the OCD does not relieve the responsible paremediate contamination that poses a threat to groundwater, surfacearty of compliance with any other federal, state, or local laws a	arty of liability should their operations have failed to adequately investigate and ace water, human health, or the environment nor does not relieve the responsible and/or regulations.								
Closure Approved by:	Date:								
Printed Name:	Title:								



#### **CLOSURE REPORT**

Property:

**Lateral 2C-55 Valve Release** NW 1/4, S30 T25N R7W **Rio Arriba County, New Mexico** 

June 8, 2020 Ensolum Project No. 05A1226080

Prepared for:

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

Prepared by:

Ranee Deechilly

**Environmental Scientist** 

Chad D'Aponti

Field Environmental Scientist

Kyle Summers, CPG Sr. Project Manager

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3.0	SOIL	REM	MEDIATION .	ACTIVITIES
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Appendix B: **Siting Documentation** 

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**Laboratory Data Sheets &** Appendix F:

**Chain of Custody Documentation** 

**Regulatory Correspondence** Appendix G:



#### **CLOSURE REPORT**

Lateral 2C-55 Valve Release NW ¼, S30 T25N R7W Rio Arriba County, New Mexico

Ensolum Project No. 05A1226080

#### 1.0 INTRODUCTION

#### 1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Lateral 2C-55 Valve Release (Site)
Location:	36.378303° North, 107.616105° West Northwest (NW) ¼ of Section 30, Township 25 North, Range 7 West Rio Arriba County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On November 9, 2019, Enterprise personnel identified a release of natural gas on the Lateral 2C-55 (an out of service line that was still connected to the gathering system). Enterprise subsequently isolated and locked the pipeline out of service. On November 14, 2019, Enterprise initiated response activities to remediate petroleum hydrocarbon impact resulting from the release.

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

#### 1.2 Project Objective

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

#### 2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. 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.

• The OSE tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). One POD (SJ-03275) was identified within approximately 0.5 miles of the Site in the OSE WRRS database. The well record for SJ-03275 indicates a depth to



water of 18 feet below grade surface (bgs). Two (2) additional PODs (SJ-00681-40 and SJ-00681-42) are located between 0.85 miles and 1.5 miles from the Site. Records for the two PODs do not indicate depth to water and appear to be related to seep tanks for livestock water use. Supporting documentation is provided in **Appendix B**.

- No cathodic-protection wells were identified within one mile of the Site.
- The Site is located within 300 feet of a New Mexico EMNRD OCD-defined continuously flowing watercourse or significant watercourse. An ephemeral wash is located approximately 290 feet from the excavation.
- The Site is not located within 200 feet of a lakebed, sinkhole or playa lake.
- The Site is not located within 300 feet of a permanent residence, school, hospital, institution or church.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were identified within 1,000 feet of the Site.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3.
- The Site is not located within 300 feet of a wetland.
- Based on information identified on the New Mexico Mining and Minerals Division's GIS, Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

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

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



#### 3.0 SOIL REMEDIATION ACTIVITIES

On November 14, 2019, Enterprise performed initial response clean-up of the affected soils at the location to mitigate potential safety. During the remediation and corrective action activities West States Energy Contractors, Inc., provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final remediation excavation measured approximately 35 feet long and 28 feet wide at the maximum extents. The maximum depth of the excavation measured approximately (18.5) feet bgs.

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

A total of approximately 1,188 cubic yards (yd³) of petroleum hydrocarbon affected soils were transported to Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance forms are provided in **Appendix C**. The excavation was backfilled with imported fill and then contoured to surrounding grade.

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

#### 4.0 SOIL SAMPLING PROGRAM

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

Ensolum's soil sampling program included the collection of 18 composite soil samples (S-1 through S-18), comprised of five (5) aliquots each, from the excavation for laboratory analyses. A clean shovel was utilized to obtain fresh aliquots from each accessible area of the excavation. An excavator was utilized to obtain fresh aliquots from areas of the excavation that exceeded depths greater than six (6) feet bgs. The New Mexico EMNRD OCD approved Enterprises' proposed sampling plan for the December 5, 2019 sampling event (**Appendix G**). A New Mexico EMNRD OCD representative was on Site during the final sampling event (December 13, 2019).

#### First Sampling Event

On December 5, 2019, composite soil samples S-1 (9'-18'), S-2 (0'-9'), S-3 (9'-18'), S-4 (0'-9'), S-6 (9'-18'), S-7 (0'-9'), S-8 (9'-18'), S-9 (0'-9'), S-10 (9'-18'), S-11 (0'-9'), S-13 (9'-18'), and S-14 (0'-9') were collected from the sidewalls of the excavation. Composite soil samples S-5 (18') and S-12 (18') were collected from the base of the excavation for laboratory analysis. Analytical results from composite soil samples S-2, S-5, S-6, and S-8 indicated New Mexico EMNRD OCD closure standard exceedances. In response to the data exceedances, the excavation was deepened and extended to removed petroleum hydrocarbon impact. Soil associated with composite soil samples S-2, S-5, S-6, and through S-9 were removed by excavation and transported to the landfarm for disposal/remediation.

#### **Second Sampling Event**

On December 13, 2019, a second sampling event was performed. Composite soil samples S-15 (0'-9'), S-17 (9'-18'), and S-18 (9'-18') were collected from the sidewalls of the excavation. Composite soil sample S-16 (18.5') was collected from the floor of the excavation.

The 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 chainof-custody procedures.

#### 5.0 SOIL LABORATORY ANALYTICAL METHODS

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

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

#### 6.0 DATA EVALUATION

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (S-1, S-3, S-4, and S-10 through S-18) to the applicable New Mexico EMNRD OCD closure criteria. Soil associated with composite soil samples S-2 and S-5 through S-9 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 at the Site indicate benzene is not present in concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).
- The laboratory analytical results for the composite soil samples collected from soils remaining at the Site indicate total BTEX is not present in concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 50 mg/kg.
- The laboratory analytical results for composite soil samples S-1, S-4, S-12, and S-16 collected from soils remaining at the Site, indicate combined TPH GRO/DRO/MRO concentrations ranging from 4.4 mg/kg (S-4) to 20 mg/kg (S-12), 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/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg.
- The laboratory analytical results for the composite soil samples collected from soils remaining at the Site indicate chloride is not present in concentrations greater than laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 600 mg/kg for chlorides.

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

#### 7.0 RECLAMATION AND REVEGETATION

The excavation was backfilled with imported fill and then contoured to the surrounding grade. Enterprise will re-seed the Site with an approved seeding mixture at the beginning of the next favorable growing season.



#### 8.0 FINDINGS AND RECOMMENDATION

On November 9, 2019, Enterprise personnel identified a release of natural gas on the Lateral 2C-55. Enterprise subsequently isolated and locked the pipeline out of service. On November 14, 2019, Enterprise initiated response activities to remediate petroleum hydrocarbon impact resulting from the release.

- The primary objective of the closure activities was to reduce COC concentrations in the on-Site soils to below the applicable New Mexico EMNRD OCD closure criteria using the New Mexico EMNRD OCD's NMAC 19.15.29 Releases as guidance.
- A total of 18 composite soil samples were collected from the walls and floor of the excavation for laboratory analysis. 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 1,188 yd<sup>3</sup> of petroleum hydrocarbon affected soils were transported to Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with imported fill and then contoured to surrounding grade.

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

#### 9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

#### 9.1 Standard of Care

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

#### 9.2 Additional Limitations

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

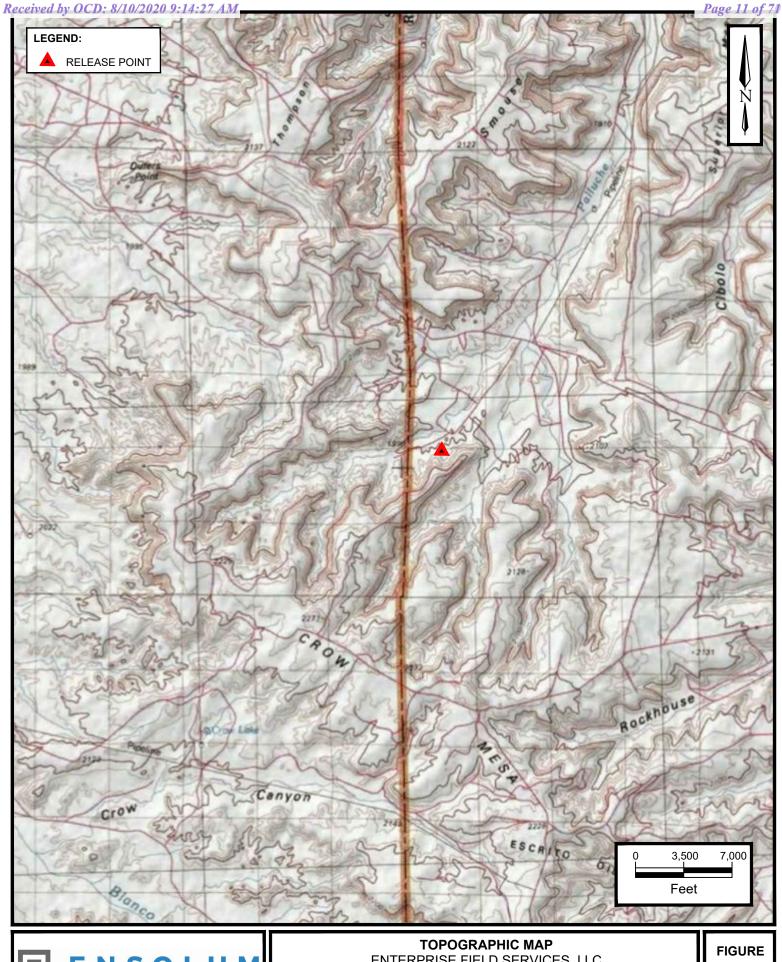
#### 9.3 Reliance

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



**APPENDIX A** 

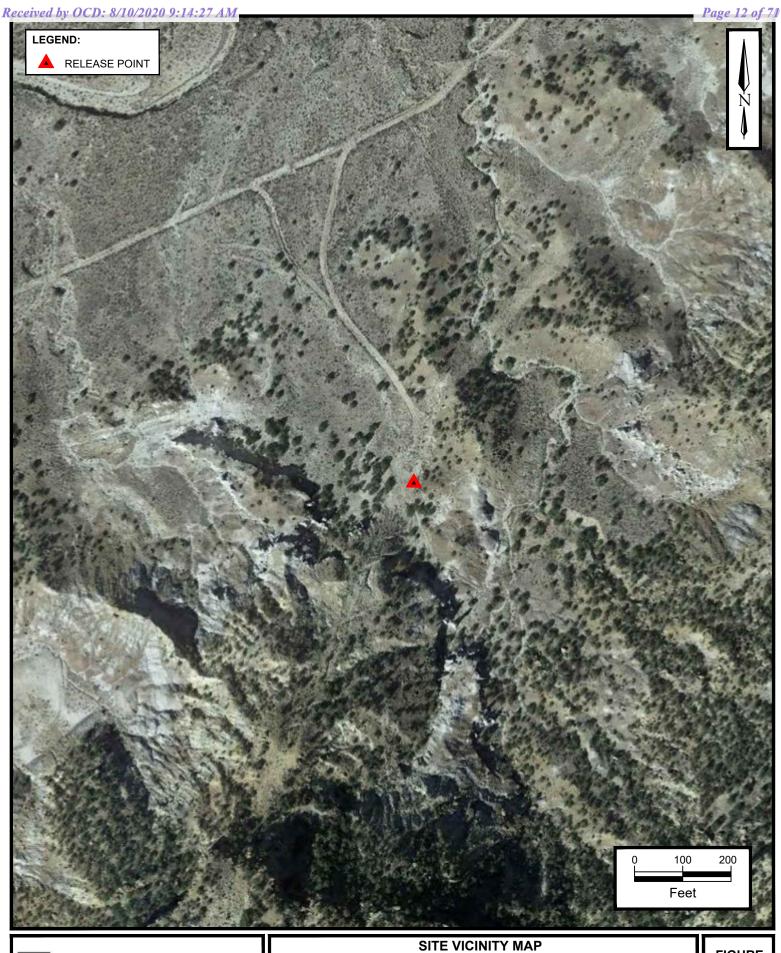
Figures





ENTERPRISE FIELD SERVICES, LLC. LATERAL 2C-55 VALVE RELEASE NW 1, S30 T25N R7W, Rio Arriba County, New Mexico 36.378303° N, 107.616105°W

Ensolum Project No.: 05A1226080



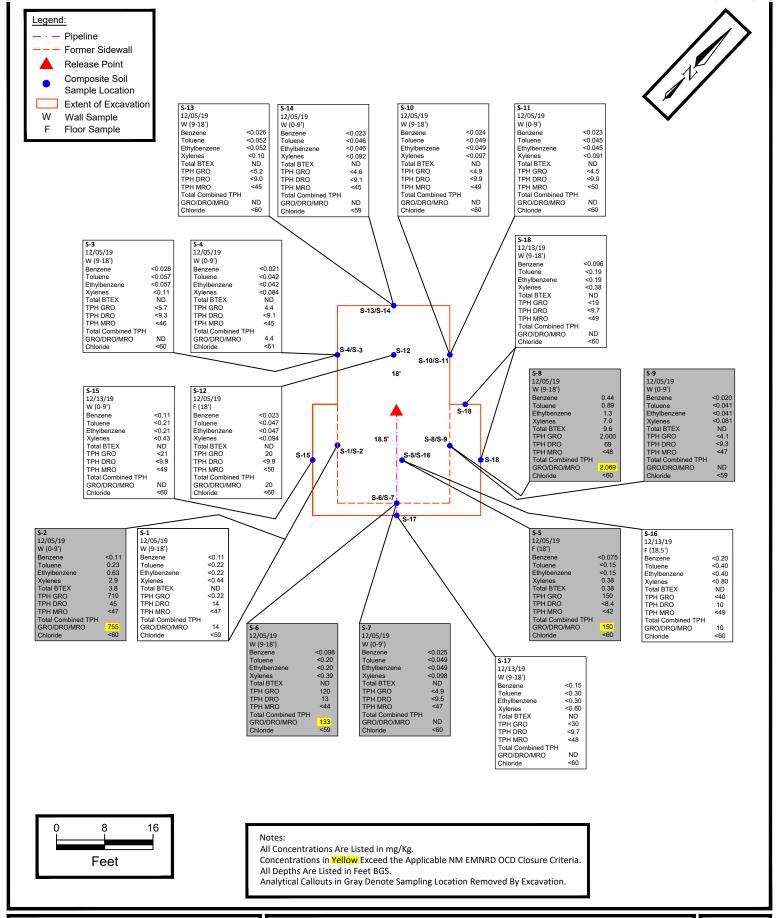


ENTERPRISE FIELD SERVICES, LLC LATERAL 2C-55 VALVE RELEASE NW 1/4, S30 T25N R7W, Rio Arriba County, New Mexico 36.378303° N, 107.616105°W

Ensolum Project No.: 05A1226080

**FIGURE** 

Environmental & Hydrogeologic Consultants



# **PENSOLUM**

SITE MAP WITH SOIL ANALYTICAL RESULTS

ENTERPRISE FIELD SERVICES, LLC. LATERAL 2C-55 VALVE RELEASE

NW <sup>1</sup>/<sub>4</sub>, S30 T25N R7W, Rio Arriba County, New Mexico 36.378303° N, 107.616105°W

Ensolum Project No.: 05A1226080

FIGURE

3

Environmental & Hydrogeologic Consultants



**APPENDIX B** 

Siting Documentation



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

No records found.

**PLSS Search:** 

**Section(s):** 30, 19, 20, 29, **Township:** 25N **Range:** 07W

32, 31



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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a (R=POD has been replaced, O=orphaned,

& no longer serves a C=the fi water right file.) Closed)

C=the file is (quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

POD
Sub- Q Q Q
Code basin County 64 16 4 Sec Tws Rng X Y
SJ SJ 4 2 2 25 25N 08W 264502 4028868\* 57 18 39

Average Depth to Water: 18 feet

Minimum Depth: 18 feet

(In feet)

Maximum Depth: 18 feet

**Record Count: 1** 

**POD Number** 

SJ 03275

PLSS Search:

Section(s): 24, 25, 36 Township: 25N Range: 08W

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/14/20 9:49 AM

Received by OCD: 8/10/2020 9:14:27 AM Page 17 of 71



## New Mexico Office of the State Engineer

# **Active & Inactive Points of Diversion**

(with Ownership Information)

(R=POD has been replaced

and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)

C=the file is closed)

(quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

Well

Sub

**County POD Number** WR File Nbr basin Use Diversion Owner Tag Code Grant Source 6416 4 Sec Tws Rng

SJ STK 48 HOMER C. BERRY RA SJ 00681 40 1 4 4 30 25N 07W SJ 00681 40

Record Count: 1

**PLSS Search:** 

**Section(s):** 30, 19, 20, 29, **Township:** 25N Range: 07W

32.31

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

Received by OCD: 8/10/2020 9:14:27 AM

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# New Mexico Office of the State Engineer

# **Active & Inactive Points of Diversion**

(with Ownership Information)

(R=POD has been replaced

and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)

C=the file is closed)

(quarters are smallest to largest) (NAD83 UTM in meters)

	Sub			Well	q q q	
WR File Nbr	basin Use Dive	ersion Owner	County POD Number	Tag Code Grant	Source 6416 4 Sec Tws Rng	X Y
SJ 00681 42	SJ STK	10 HOMER C. BERRY	SJ <u>SJ 00681 42</u>		3 3 1 25 25N 08W	263117 4028481*
SJ 03275	SJ STK	3 US BLM	SJ <u>SJ 03275</u>		Shallow 4 2 2 25 25N 08W	264502 4028868*

Record Count: 2

**PLSS Search:** 

**Section(s):** 24, 25, 36 **Township:** 25N **Range:** 08W

(acre ft per annum)

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



**APPENDIX C** 

Executed C-138 Solid Waste Acceptance Forms

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV

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

97057-1049

☐ DENIED (Must Be Maintained As Permanent Record)

Form C-138 Revised 08/01/11

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

1220 S. St. Francis Dr., Sama Fe, NM 8/303	
REQUEST FOR APPROVAL TO A	CCEPT SOLID WASTE
1. Generator Name and Address:	
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401	
2. Originating Site:	AFE: N44328
Lateral 2C-55	PM:Maron O'Brien
	Pay Key: RB21260
2. Location of Material (Street Address, City, State or ULSTR):	
UL C Section 30 T25N R7W; 36.616105, -107.378303	Nov/Dec 2019
4. Source and Description of Waste:	
Source: Hydrocarbon contaminated soil/sludge associated with remediation	activities from a natural gas pipeline release.
Description: Hydrocarbon contaminated soil/sludge associated with remediat Estimated Volume 50 (yd) bbls Known Volume (to be entered by the operate	or at the end of the haul) 72 /yd³ bbls
5. GENERATOR CERTIFICATION STATEMEN	NT OF WASTE STATUS
Horn Low	
I, Thomas Long, representative or authorized agent for Enterprise Produ	acts Operating do hereby
Generator Signature	- Jak - 110 Postinos and Post at 1 A 1 A 1 A 1000
certify that according to the Resource Conservation and Recovery Act (RCRA) an regulatory determination, the above described waste is: (Check the appropriate cla	
	, i
□ RCRA Exempt: Oil field wastes generated from oil and gas exploration a exempt waste.     □ Continuous Continuo	
☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does no characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or lisubpart D, as amended. The following documentation is attached to demonst the appropriate items)	isted hazardous waste as defined in 40 CFR, part 261,
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Kno	owledge
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION	N STATEMENT FOR LANDFARMS
I, Thomas Long  11-14-19, representative for Enterprise Products Operat  Generator Signature	ting authorize to complete
the required testing/sign the Generator Waste Testing Certification.	
I, Greg Crabbee representative for Envirotech I	de hereber englisher
representative samples of the oil field waste have been subjected to the paint filter	Inc do hereby certify that
have been found to conform to the specific requirements applicable to landfarms p	oursuant to Section 15 of 19.15.36 NMAC. The results
of the representative samples are attached to demonstrate the above-described was	ste conform to the requirements of Section 15 of
19.15.36 NMAC.	
5. Transporter: TBD, Acc Services Yucca, West State	es, Prado Farms, Peterrosa, L+L
OCD Permitted Surface Waste Management Facility	J.P. Trucking

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

TITLE: <u>Fautro Manager</u>

TELEPHONE NO.: 505-632-0615

Address of Facility: Hill Top, NM Method of Treatment and/or Disposal:

**Waste Acceptance Status:** 

PRINT NAME:

SIGNATURE:

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility \* Permit #: NM01-0011

aste Management Facility Authorized Agent

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

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

97057-1049

Form C-138 Revised 08/01/11

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

#### REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

REQUEST FOR ATTROVAL TO ACC.	EI I DODID WINDID
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401	
2. Originating Site: Lateral 2C-55	AFE: N44328 PM:Maron O'Brien Pay Key: RB21200
<ol> <li>Location of Material (Street Address, City, State or ULSTR): UL C Section 30 T25N R7W; 36.616105, -107.378303</li> </ol>	Dec. 2019
4. Source and Description of Waste: Source: Hydrocarbon contaminated soil/sludge associated with remediation activ Description: Hydrocarbon contaminated soil/sludge associated with remediation a Estimated Volume 50 yd³ bbls Known Volume (to be entered by the operator at	activities from a natural gas pipeline release.
5. GENERATOR CERTIFICATION STATEMENT O	OF WASTE STATUS
I, Thomas Long, representative or authorized agent for Enterprise Products C Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the regulatory determination, the above described waste is: (Check the appropriate classific	US Environmental Protection Agency's July 1988
RCRA Exempt: Oil field wastes generated from oil and gas exploration and p exempt waste.  **Operator Use Only: Waste Acceptance Frequency   Month	
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not excharacteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed subpart D, as amended. The following documentation is attached to demonstrate the appropriate items)	hazardous waste as defined in 40 CFR, part 261,
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowled	dge
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION ST	ATEMENT FOR LANDFARMS
I, Thomas Long  12-16-19, representative for Enterprise Products Operating a Generator Signature the required testing/sign the Generator Waste Testing Certification.  I,	do hereby certify that and tested for chloride content and that the samples ant to Section 15 of 19.15.36 NMAC. The results onform to the requirements of Section 15 of
5. Transporter: TBD, De Herrara Yucca, West States, II	ado Farms,
Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011  Address of Facility: Hill Top, NM  Method of Treatment and/or Disposal:  Evaporation Injection Treating Plant Landfarm  Waste Acceptance Status:	Landfill Other
	ENIED (Must Be Maintained As Permanent Record)
PRINT NAME: Gray Crubbrain TITLE: Enviro	Manager DATE: 12/16/19
SIGNATURE: TELEPHONE I	NO.: <u>505-632-0615</u>



APPENDIX D

Photographic Documentation

#### SITE PHOTOGRAPHS

Enterprise Field Services, LLC Closure Report Lateral 2C-55 Valve Release Ensolum Project No. 05A1226080



#### Photograph 1

Photograph Description: View of the release area.



#### Photograph 2

Photograph Description: View of inprocess excavation activities.



#### Photograph 3

Photograph Description: View of inprocess excavation activities.



#### **SITE PHOTOGRAPHS**

Enterprise Field Services, LLC Closure Report Lateral 2C-55 Valve Release Ensolum Project No. 05A1226080



#### Photograph 4

Photograph Description: View of inprocess excavation activities.



#### Photograph 5

Photograph Description: View of the final excavation.



#### Photograph 6

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





**APPENDIX E** 

Table 1 – Soil Analytical Summary



# TABLE 1 Lateral 2C-55 Valve Release SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite	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	Chloride (mg/kg)
		G - Grab							(mg/kg)	(mg/kg)	(mg/kg)	(GRO/DRO/MRO) (mg/kg)	
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria		10	NE	NE	NE	50				100	600		
					Exca	avation Soil Sample	s Removed by Ex	cavation					
S-2	12.05.19	С	0 to 9	<0.11	0.23	0.63	2.9	3.8	710	45	<47	755	<60
S-5	12.05.19	С	18	<0.075	<0.15	<0.15	0.38	0.38	150	<8.4	<42	150	<60
S-6	12.05.19	С	9 to 18	<0.098	<0.20	<0.20	< 0.39	ND	120	13	<44	133	<59
S-7	12.05.19	С	0 to 9	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<9.5	<47	ND	<60
S-8	12.05.19	С	9 to 18	0.44	0.89	1.3	7.0	9.6	2,000	69	<48	2,069	<60
S-9	12.05.19	С	0 to 9	<0.020	<0.041	<0.041	<0.081	ND	<4.1	<9.3	<47	ND	<59
						Excavation Comp	posite Soil Sample	s					
S-1	12.05.19	С	9 to 18	<0.11	<0.22	<0.22	<0.44	ND	<22	14	<47	14	<59
S-3	12.05.19	С	9 to 18	<0.028	<0.057	<0.057	<0.11	ND	<5.7	<9.3	<46	ND	<60
S-4	12.05.19	С	0 to 9	<0.021	<0.042	<0.042	<0.084	ND	4.4	<9.1	<45	4.4	<61
S-10	12.05.19	С	9 to 18	<0.024	<0.049	<0.049	<0.097	ND	<4.9	<9.9	<49	ND	<60
S-11	12.05.19	С	0 to 9	<0.023	<0.045	<0.045	<0.091	ND	<4.5	<9.9	<50	ND	<60
S-12	12.05.19	С	18	<0.023	<0.047	<0.047	<0.094	ND	20	<9.9	<50	20	<60
S-13	12.05.19	С	9 to 18	<0.026	<0.052	<0.052	<0.10	ND	<5.2	<9.0	<45	ND	<60
S-14	12.05.19	С	0 to 9	<0.023	<0.046	<0.046	<0.092	ND	<4.6	<9.1	<45	ND	<59
S-15	12.13.19	С	0 to 9	<0.11	<0.21	<0.21	<0.43	ND	<21	<9.9	<49	ND	<60
S-16	12.13.19	С	18.5	<0.20	<0.40	<0.40	<0.80	ND	<40	10	<49	10	<60
S-17	12.13.19	С	9 to 18	<0.15	<0.30	<0.30	<0.60	ND	<30	<9.7	<48	ND	<60
S-18	12.13.19	С	9 to 18	<0.096	<0.19	<0.19	<0.38	ND	<19	<9.7	<49	ND	<60

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

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

NA = Not Analyzed

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics



## **APPENDIX F**

Laboratory Data Sheets & Chain of Custody Documentation



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

December 09, 2019

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

FAX

RE: Lateral 2C 55 OrderNo.: 1912266

#### Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 14 sample(s) on 12/6/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 12/9/2019

12/6/2019 9:24:30 AM

12/6/2019 9:24:30 AM

12/6/2019 9:24:30 AM

12/6/2019 9:24:30 AM

B64998

B64998

B64998

B64998

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-1

 Project:
 Lateral 2C 55
 Collection Date: 12/5/2019 11:00:00 AM

 Lab ID:
 1912266-001
 Matrix: MEOH (SOIL)
 Received Date: 12/6/2019 8:00:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride ND 59 mg/Kg 20 12/6/2019 10:30:47 AM 49195 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) 14 9.4 mg/Kg 12/6/2019 10:23:37 AM 49194 ND Motor Oil Range Organics (MRO) 47 mg/Kg 1 12/6/2019 10:23:37 AM 49194 Surr: DNOP 89.6 12/6/2019 10:23:37 AM 49194 70-130 %Rec **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 5 12/6/2019 9:24:30 AM G64998 22 mg/Kg Surr: BFB 95.8 66.6-105 %Rec 5 12/6/2019 9:24:30 AM G64998 **EPA METHOD 8021B: VOLATILES** Analyst: NSB 12/6/2019 9:24:30 AM ND Benzene 0.11 mg/Kg 5 B64998

ND

ND

ND

107

0.22

0.22

0.44

80-120

mg/Kg

mg/Kg

mg/Kg

%Rec

5

5

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

Page 1 of 20

Date Reported: 12/9/2019

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-2

**Project:** Lateral 2C 55 **Collection Date:** 12/5/2019 11:05:00 AM

**Lab ID:** 1912266-002 **Matrix:** MEOH (SOIL) **Received Date:** 12/6/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	60		mg/Kg	20	12/6/2019 10:43:08 AM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	BRM
Diesel Range Organics (DRO)	45	9.3		mg/Kg	1	12/6/2019 10:32:28 AM	49194
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/6/2019 10:32:28 AM	49194
Surr: DNOP	91.4	70-130		%Rec	1	12/6/2019 10:32:28 AM	49194
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	710	21		mg/Kg	5	12/6/2019 9:47:18 AM	G64998
Surr: BFB	624	66.6-105	S	%Rec	5	12/6/2019 9:47:18 AM	G64998
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.11		mg/Kg	5	12/6/2019 9:47:18 AM	B64998
Toluene	0.23	0.21		mg/Kg	5	12/6/2019 9:47:18 AM	B64998
Ethylbenzene	0.63	0.21		mg/Kg	5	12/6/2019 9:47:18 AM	B64998
Xylenes, Total	2.9	0.43		mg/Kg	5	12/6/2019 9:47:18 AM	B64998
Surr: 4-Bromofluorobenzene	131	80-120	S	%Rec	5	12/6/2019 9:47:18 AM	B64998

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

- 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 20

#### **Analytical Report**

Lab Order **1912266**Date Reported: **12/9/2019** 

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-3

**Project:** Lateral 2C 55 **Collection Date:** 12/5/2019 11:10:00 AM

**Lab ID:** 1912266-003 **Matrix:** MEOH (SOIL) **Received Date:** 12/6/2019 8:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	60	mg/Kg	20	12/6/2019 10:55:29 AM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	12/6/2019 10:41:25 AM	49194
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	12/6/2019 10:41:25 AM	49194
Surr: DNOP	87.1	70-130	%Rec	1	12/6/2019 10:41:25 AM	49194
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.7	mg/Kg	1	12/6/2019 10:10:10 AM	G64998
Surr: BFB	95.0	66.6-105	%Rec	1	12/6/2019 10:10:10 AM	G64998
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.028	mg/Kg	1	12/6/2019 10:10:10 AM	B64998
Toluene	ND	0.057	mg/Kg	1	12/6/2019 10:10:10 AM	B64998
Ethylbenzene	ND	0.057	mg/Kg	1	12/6/2019 10:10:10 AM	B64998
Xylenes, Total	ND	0.11	mg/Kg	1	12/6/2019 10:10:10 AM	B64998
Surr: 4-Bromofluorobenzene	107	80-120	%Rec	1	12/6/2019 10:10:10 AM	B64998

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: 12/9/2019

Analyst: NSB

#### Hall Environmental Analysis Laboratory, Inc.

**EPA METHOD 8015D: GASOLINE RANGE** 

CLIENT: ENSOLUM Client Sample ID: S-4

 Project:
 Lateral 2C 55
 Collection Date: 12/5/2019 11:15:00 AM

 Lab ID:
 1912266-004
 Matrix: MEOH (SOIL)
 Received Date: 12/6/2019 8:00:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses Analyst: MRA **EPA METHOD 300.0: ANIONS** Chloride ND 61 mg/Kg 20 12/6/2019 11:07:50 AM 49195 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) ND 9.1 mg/Kg 12/6/2019 10:50:24 AM 49194 ND Motor Oil Range Organics (MRO) 45 mg/Kg 1 12/6/2019 10:50:24 AM 49194 Surr: DNOP 80.5 12/6/2019 10:50:24 AM 49194 70-130 %Rec

12/6/2019 10:33:05 AM G64998 Gasoline Range Organics (GRO) 4.4 4.2 mg/Kg Surr: BFB 99.8 66.6-105 %Rec 12/6/2019 10:33:05 AM G64998 **EPA METHOD 8021B: VOLATILES** Analyst: NSB ND 12/6/2019 10:33:05 AM B64998 Benzene 0.021 mg/Kg Toluene ND 0.042 mg/Kg 12/6/2019 10:33:05 AM B64998 Ethylbenzene ND 0.042 mg/Kg 12/6/2019 10:33:05 AM B64998 Xylenes, Total ND 0.084 mg/Kg 12/6/2019 10:33:05 AM B64998 Surr: 4-Bromofluorobenzene 12/6/2019 10:33:05 AM B64998 105 80-120 %Rec

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: 12/9/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-5

**Project:** Lateral 2C 55 **Collection Date:** 12/5/2019 11:20:00 AM

**Lab ID:** 1912266-005 **Matrix:** MEOH (SOIL) **Received Date:** 12/6/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	60		mg/Kg	20	12/6/2019 11:44:53 AM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	12/6/2019 10:59:22 AM	49194
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	12/6/2019 10:59:22 AM	49194
Surr: DNOP	80.6	70-130		%Rec	1	12/6/2019 10:59:22 AM	49194
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	150	15		mg/Kg	5	12/6/2019 10:55:53 AM	G64998
Surr: BFB	443	66.6-105	S	%Rec	5	12/6/2019 10:55:53 AM	G64998
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.075		mg/Kg	5	12/6/2019 10:55:53 AM	B64998
Toluene	ND	0.15		mg/Kg	5	12/6/2019 10:55:53 AM	B64998
Ethylbenzene	ND	0.15		mg/Kg	5	12/6/2019 10:55:53 AM	B64998
Xylenes, Total	0.38	0.30		mg/Kg	5	12/6/2019 10:55:53 AM	B64998
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	5	12/6/2019 10:55:53 AM	B64998

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: 12/9/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-6

 Project:
 Lateral 2C 55
 Collection Date: 12/5/2019 11:25:00 AM

 Lab ID:
 1912266-006
 Matrix: MEOH (SOIL)
 Received Date: 12/6/2019 8:00:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride ND 59 mg/Kg 20 12/6/2019 11:57:13 AM 49195 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) 13 8.8 mg/Kg 12/6/2019 11:08:23 AM 49194 ND Motor Oil Range Organics (MRO) mg/Kg 1 12/6/2019 11:08:23 AM 49194 44 Surr: DNOP 81.4 12/6/2019 11:08:23 AM 49194 70-130 %Rec 1

**EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB 12/6/2019 11:18:46 AM G64998 Gasoline Range Organics (GRO) 120 20 mg/Kg 5 Surr: BFB 217 66.6-105 S %Rec 5 12/6/2019 11:18:46 AM G64998 **EPA METHOD 8021B: VOLATILES** Analyst: NSB ND mg/Kg 12/6/2019 11:18:46 AM B64998 Benzene 0.098 5 Toluene ND 0.20 mg/Kg 12/6/2019 11:18:46 AM B64998 Ethylbenzene ND 0.20 mg/Kg 5 12/6/2019 11:18:46 AM B64998 Xylenes, Total ND 0.39 mg/Kg 5 12/6/2019 11:18:46 AM B64998 Surr: 4-Bromofluorobenzene 80-120 12/6/2019 11:18:46 AM B64998 110 %Rec

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: 12/9/2019

Analyst: NSB

#### Hall Environmental Analysis Laboratory, Inc.

**EPA METHOD 8015D: GASOLINE RANGE** 

CLIENT: ENSOLUM Client Sample ID: S-7

 Project:
 Lateral 2C 55
 Collection Date: 12/5/2019 11:30:00 AM

 Lab ID:
 1912266-007
 Matrix: MEOH (SOIL)
 Received Date: 12/6/2019 8:00:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride ND 60 mg/Kg 20 12/6/2019 12:09:33 PM 49195 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) ND 9.5 mg/Kg 12/6/2019 11:17:23 AM 49194 ND Motor Oil Range Organics (MRO) 47 mg/Kg 1 12/6/2019 11:17:23 AM 49194 Surr: DNOP 85.1 12/6/2019 11:17:23 AM 49194 70-130 %Rec

12/6/2019 11:41:42 AM G64998 Gasoline Range Organics (GRO) ND 4.9 mg/Kg Surr: BFB 93.9 66.6-105 %Rec 12/6/2019 11:41:42 AM G64998 **EPA METHOD 8021B: VOLATILES** Analyst: NSB ND 12/6/2019 11:41:42 AM B64998 Benzene 0.025 mg/Kg Toluene ND 0.049 mg/Kg 12/6/2019 11:41:42 AM B64998 Ethylbenzene ND 0.049 mg/Kg 12/6/2019 11:41:42 AM B64998 Xylenes, Total ND 0.098 mg/Kg 12/6/2019 11:41:42 AM B64998 Surr: 4-Bromofluorobenzene 12/6/2019 11:41:42 AM B64998 104 80-120 %Rec

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: 12/9/2019

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-8

**Project:** Lateral 2C 55 **Collection Date:** 12/5/2019 11:35:00 AM

**Lab ID:** 1912266-008 **Matrix:** MEOH (SOIL) **Received Date:** 12/6/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	60		mg/Kg	20	12/6/2019 12:21:54 PM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	69	9.6		mg/Kg	1	12/6/2019 11:26:25 AM	49194
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/6/2019 11:26:25 AM	49194
Surr: DNOP	84.2	70-130		%Rec	1	12/6/2019 11:26:25 AM	49194
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	2000	220		mg/Kg	50	12/6/2019 1:13:13 PM	G64998
Surr: BFB	191	66.6-105	S	%Rec	50	12/6/2019 1:13:13 PM	G64998
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	0.44	0.11		mg/Kg	5	12/6/2019 12:04:36 PM	B64998
Toluene	0.89	0.22		mg/Kg	5	12/6/2019 12:04:36 PM	B64998
Ethylbenzene	1.3	0.22		mg/Kg	5	12/6/2019 12:04:36 PM	B64998
Xylenes, Total	7.0	0.45		mg/Kg	5	12/6/2019 12:04:36 PM	B64998
Surr: 4-Bromofluorobenzene	142	80-120	S	%Rec	5	12/6/2019 12:04:36 PM	B64998

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: 12/9/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-9

**Project:** Lateral 2C 55 **Collection Date:** 12/5/2019 11:40:00 AM

**Lab ID:** 1912266-009 **Matrix:** MEOH (SOIL) **Received Date:** 12/6/2019 8:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	59	mg/Kg	20	12/6/2019 12:34:14 PM	l 49195
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: BRM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	12/6/2019 11:35:29 AM	l 49194
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/6/2019 11:35:29 AM	l 49194
Surr: DNOP	84.5	70-130	%Rec	1	12/6/2019 11:35:29 AM	l 49194
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	12/6/2019 12:27:22 PM	G64998
Surr: BFB	92.2	66.6-105	%Rec	1	12/6/2019 12:27:22 PM	G64998
EPA METHOD 8021B: VOLATILES					Analyst	:: NSB
Benzene	ND	0.020	mg/Kg	1	12/6/2019 12:27:22 PM	B64998
Toluene	ND	0.041	mg/Kg	1	12/6/2019 12:27:22 PM	B64998
Ethylbenzene	ND	0.041	mg/Kg	1	12/6/2019 12:27:22 PM	B64998
Xylenes, Total	ND	0.081	mg/Kg	1	12/6/2019 12:27:22 PM	B64998
Surr: 4-Bromofluorobenzene	105	80-120	%Rec	1	12/6/2019 12:27:22 PM	B64998

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: 12/9/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-10

**Project:** Lateral 2C 55 **Collection Date:** 12/5/2019 11:45:00 AM

**Lab ID:** 1912266-010 **Matrix:** MEOH (SOIL) **Received Date:** 12/6/2019 8:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	12/6/2019 12:46:35 PM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	12/6/2019 11:44:33 AM	49194
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/6/2019 11:44:33 AM	49194
Surr: DNOP	85.0	70-130	%Rec	1	12/6/2019 11:44:33 AM	49194
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/6/2019 12:50:18 PM	G64998
Surr: BFB	84.8	66.6-105	%Rec	1	12/6/2019 12:50:18 PM	G64998
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	12/6/2019 12:50:18 PM	B64998
Toluene	ND	0.049	mg/Kg	1	12/6/2019 12:50:18 PM	B64998
Ethylbenzene	ND	0.049	mg/Kg	1	12/6/2019 12:50:18 PM	B64998
Xylenes, Total	ND	0.097	mg/Kg	1	12/6/2019 12:50:18 PM	B64998
Surr: 4-Bromofluorobenzene	99.6	80-120	%Rec	1	12/6/2019 12:50:18 PM	B64998

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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Xylenes, Total

Surr: 4-Bromofluorobenzene

# Analytical Report Lab Order 1912266

Date Reported: 12/9/2019

12/6/2019 9:27:32 AM

12/6/2019 9:27:32 AM

49182

49182

### Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-11

 Project:
 Lateral 2C 55
 Collection Date: 12/5/2019 11:50:00 AM

 Lab ID:
 1912266-011
 Matrix: MEOH (SOIL)
 Received Date: 12/6/2019 8:00:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride ND 60 mg/Kg 20 12/6/2019 12:58:56 PM 49195 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: BRM Diesel Range Organics (DRO) ND 9.9 mg/Kg 12/6/2019 11:53:36 AM 49194 ND Motor Oil Range Organics (MRO) 50 mg/Kg 1 12/6/2019 11:53:36 AM 49194 Surr: DNOP 84.6 70-130 %Rec 12/6/2019 11:53:36 AM 49194 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 12/6/2019 9:27:32 AM 49182 4.5 mg/Kg Surr: BFB 82.4 66.6-105 %Rec 12/6/2019 9:27:32 AM 49182 **EPA METHOD 8021B: VOLATILES** Analyst: NSB ND 12/6/2019 9:27:32 AM Benzene 0.023 mg/Kg 49182 Toluene ND 0.045 mg/Kg 12/6/2019 9:27:32 AM 49182 Ethylbenzene ND 0.045 mg/Kg 1 12/6/2019 9:27:32 AM 49182

ND

95.8

0.091

80-120

mg/Kg

%Rec

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: 12/9/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-12

**Project:** Lateral 2C 55 **Collection Date:** 12/5/2019 11:55:00 AM

**Lab ID:** 1912266-012 **Matrix:** MEOH (SOIL) **Received Date:** 12/6/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	60		mg/Kg	20	12/6/2019 1:11:17 PM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/6/2019 12:02:39 PM	49194
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/6/2019 12:02:39 PM	49194
Surr: DNOP	84.3	70-130		%Rec	1	12/6/2019 12:02:39 PM	49194
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	20	4.7		mg/Kg	1	12/6/2019 9:50:59 AM	49182
Surr: BFB	127	66.6-105	S	%Rec	1	12/6/2019 9:50:59 AM	49182
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.023		mg/Kg	1	12/6/2019 9:50:59 AM	49182
Toluene	ND	0.047		mg/Kg	1	12/6/2019 9:50:59 AM	49182
Ethylbenzene	ND	0.047		mg/Kg	1	12/6/2019 9:50:59 AM	49182
Xylenes, Total	ND	0.094		mg/Kg	1	12/6/2019 9:50:59 AM	49182
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/6/2019 9:50:59 AM	49182

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

- 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: 12/9/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-13

**Project:** Lateral 2C 55 **Collection Date:** 12/5/2019 12:00:00 PM

**Lab ID:** 1912266-013 **Matrix:** MEOH (SOIL) **Received Date:** 12/6/2019 8:00:00 AM

Analyses	Result	RL (	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	60	mg/Kg	20	12/6/2019 1:23:37 PM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.0	mg/Kg	1	12/6/2019 12:11:43 PM	49194
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	12/6/2019 12:11:43 PM	49194
Surr: DNOP	82.8	70-130	%Rec	1	12/6/2019 12:11:43 PM	49194
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.2	mg/Kg	1	12/6/2019 10:14:29 AM	49182
Surr: BFB	86.4	66.6-105	%Rec	1	12/6/2019 10:14:29 AM	49182
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.026	mg/Kg	1	12/6/2019 10:14:29 AM	49182
Toluene	ND	0.052	mg/Kg	1	12/6/2019 10:14:29 AM	49182
Ethylbenzene	ND	0.052	mg/Kg	1	12/6/2019 10:14:29 AM	49182
Xylenes, Total	ND	0.10	mg/Kg	1	12/6/2019 10:14:29 AM	49182
Surr: 4-Bromofluorobenzene	96.9	80-120	%Rec	1	12/6/2019 10:14:29 AM	49182

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

- 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: 12/9/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-14

**Project:** Lateral 2C 55 **Collection Date:** 12/5/2019 12:05:00 PM

**Lab ID:** 1912266-014 **Matrix:** MEOH (SOIL) **Received Date:** 12/6/2019 8:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	59	mg/Kg	20	12/6/2019 1:35:58 PM	49195
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	12/6/2019 12:20:45 PM	49194
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	12/6/2019 12:20:45 PM	49194
Surr: DNOP	83.7	70-130	%Rec	1	12/6/2019 12:20:45 PM	49194
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	12/6/2019 10:38:00 AM	49182
Surr: BFB	84.2	66.6-105	%Rec	1	12/6/2019 10:38:00 AM	49182
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.023	mg/Kg	1	12/6/2019 10:38:00 AM	49182
Toluene	ND	0.046	mg/Kg	1	12/6/2019 10:38:00 AM	49182
Ethylbenzene	ND	0.046	mg/Kg	1	12/6/2019 10:38:00 AM	49182
Xylenes, Total	ND	0.092	mg/Kg	1	12/6/2019 10:38:00 AM	49182
Surr: 4-Bromofluorobenzene	95.8	80-120	%Rec	1	12/6/2019 10:38:00 AM	49182

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.

WO#: **1912266** 

09-Dec-19

Client: ENSOLUM
Project: Lateral 2C 55

Sample ID: MB-49195 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **49195** RunNo: **65000** 

Prep Date: 12/6/2019 Analysis Date: 12/6/2019 SeqNo: 2230260 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-49195 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 49195 RunNo: 65000

Prep Date: 12/6/2019 Analysis Date: 12/6/2019 SeqNo: 2230261 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 97.0 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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### Hall Environmental Analysis Laboratory, Inc.

12

09-Dec-19

WO#:

Client: ENSOLUM
Project: Lateral 2C 55

Sample ID: LCS-49194 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 49194 RunNo: 64995 Prep Date: 12/6/2019 Analysis Date: 12/6/2019 SeqNo: 2229278 Units: mg/Kg PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Diesel Range Organics (DRO) 10 0 44 50.00 87.4 63.9 124 Surr: DNOP 3.8 5.000 75.2 130

Sample ID: MB-49194 TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: MBLK Client ID: PBS Batch ID: 49194 RunNo: 64995 Prep Date: 12/6/2019 Analysis Date: 12/6/2019 SeqNo: 2229279 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

122

70

130

10.00

#### Qualifiers:

Surr: DNOP

- 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.

WO#: **1912266** 

09-Dec-19

Client: ENSOLUM
Project: Lateral 2C 55

Sample ID: mb-49182 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 49182 RunNo: 64997

Prep Date: 12/5/2019 Analysis Date: 12/6/2019 SeqNo: 2229609 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 900 1000 89.8 66.6 105

Sample ID: Ics-49182 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 49182 RunNo: 64997

Prep Date: 12/5/2019 Analysis Date: 12/6/2019 SeqNo: 2229610 Units: mg/Kg

HighLimit Analyte Result PQL SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 5.0 25.00 O 88.7 80 120 Surr: BFB 1000 1000 102 66.6 105

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

Client ID: PBS Batch ID: G64998 RunNo: 64998

Prep Date: Analysis Date: 12/6/2019 SeqNo: 2229654 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 890 1000 89.5 66.6 105

Sample ID: 2.5ug gro Ics SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: G64998 RunNo: 64998

Prep Date: Analysis Date: 12/6/2019 SeqNo: 2229655 Units: mg/Kg

SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual Gasoline Range Organics (GRO) 23 5.0 25.00 90.2 80 120

Surr: BFB 1000 1000 103 66.6 105

Sample ID: 1912266-001ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: **S-1** Batch ID: **G64998** RunNo: **64998** 

Prep Date: Analysis Date: 12/6/2019 SeqNo: 2229656 Units: mg/Kg

Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 22 9.281 110 111.0 93.2 69.1 142 Surr: BFB 4800 4440 108 66.6 105 S

Sample ID: 1912266-001amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: S-1 Batch ID: G64998 RunNo: 64998

Prep Date: Analysis Date: 12/6/2019 SeqNo: 2229657 Units: mg/Kg

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

#### Qualifiers:

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

WO#: **1912266** 

Qual

09-Dec-19

Client: ENSOLUM
Project: Lateral 2C 55

Client ID: S-1

Sample ID: 1912266-001amsd SampType: MSD

TestCode: EPA Method 8015D: Gasoline Range

Batch ID: **G64998** RunNo: **64998** 

Prep Date: Analysis Date: 12/6/2019 SeqNo: 2229657 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	
Gasoline Range Organics (GRO)	110	22	111.0	9.281	89.5	69.1	142	3.73	20	
Surr: BFB	4500		4440		102	66.6	105	0	0	

### Qualifiers:

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

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

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **1912266** 

09-Dec-19

Client: ENSOLUM
Project: Lateral 2C 55

Sample ID: <b>mb-49182</b>	SampT	SampType: MBLK			tCode: El						
Client ID: PBS	Batcl	n ID: <b>49</b>	182	F	RunNo: 6	4997					
Prep Date: 12/5/2019	Analysis D	Date: 12	2/6/2019	5	SeqNo: 2	229631	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.025									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120				
Sample ID: <b>LCS-49182</b>	SampT	ype: <b>LC</b>	CS TestCode: EPA Method 8021B: Volatiles								

Campic 1D. <b>LC3-43102</b>	Campi	урс. <b>_С</b>		103	ioode. Li	A MELITOU	OUZ ID. VOIAL	iics			
Client ID: LCSS	Batcl	n ID: <b>49</b> ′	182	F	RunNo: 6	4997					
Prep Date: 12/5/2019	Analysis D	Date: 12	2/6/2019	S	SeqNo: 2	229632	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.99	0.025	1.000	0	99.3	80	120				
Toluene	1.0	0.050	1.000	0	104	80	120				
Ethylbenzene	1.1	0.050	1.000	0	106	80	120				
Xylenes, Total	3.2	0.10	3.000	0	107	80	120				
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120				

Sample ID: rb	SampT	Type: MBLK TestCode: EPA Method 8021B: Volatiles											
Client ID: PBS	Batch	n ID: <b>B6</b>	4998	F	RunNo: 6	64998							
Prep Date:	Analysis D	ate: 12	2/6/2019	8	SeqNo: <b>2229704</b> Units:				mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	ND	0.025											
Toluene	ND	0.050											
Ethylbenzene	ND	0.050											
Xylenes, Total	ND	0.10											
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120						

Sample ID: 100ng btex Ics	Samp	Гуре: <b>LC</b>	S	Tes	tCode: El	PA Method	8021B: Vola	iles			
Client ID: LCSS	Batc	h ID: <b>B6</b>	4998	F							
Prep Date:	Analysis [	Date: 12	2/6/2019	9	SeqNo: 2	229705	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.99	0.025	1.000	0	98.6	80	120				
Toluene	0.98	0.050	1.000	0	97.9	80	120				
Ethylbenzene	0.98	0.050	1.000	0	97.8	80	120				
Xylenes, Total	2.9	0.10	3.000	0	97.6	80	120				
Surr: 4-Bromofluorobenzene	1.2		1.000		117	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 19 of 20

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1912266** 

09-Dec-19

Client: ENSOLUM
Project: Lateral 2C 55

Sample ID: 1912266-002ams	SampT	ype: <b>MS</b>	3	Tes	tCode: El	tiles				
Client ID: S-2	Batch	1D: <b>B6</b>	4998	RunNo: <b>64998</b>						
Prep Date:	Analysis D	ate: 12	2/6/2019	\$	SeqNo: 2	229706	706 Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.1	0.11	4.270	0.07293	93.2	76	123			
Toluene	4.3	0.21	4.270	0.2339	94.5	80.3	127			
Ethylbenzene	4.7	0.21	4.270	0.6280	95.6	80.2	131			
Xylenes, Total	15	0.43	12.81	2.875	95.2	78	133			
Surr: 4-Bromofluorobenzene	5.2		4.270		121	80	120			S

Sample ID: 1912266-002amsd	I Samp⊺	уре: <b>М</b> \$	SD	TestCode: EPA Method 8021B: Volatiles							
Client ID: S-2	Batcl	h ID: <b>B6</b>	4998	F							
Prep Date:	Analysis D	Date: 12	2/6/2019	\$	SeqNo: 2	229707	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	4.1	0.11	4.270	0.07293	93.7	76	123	0.499	20		
Toluene	4.2	0.21	4.270	0.2339	93.9	80.3	127	0.679	20		
Ethylbenzene	4.7	0.21	4.270	0.6280	95.3	80.2	131	0.231	20		
Xylenes, Total	15	0.43	12.81	2.875	94.9	78	133	0.257	20		
Surr: 4-Bromofluorobenzene	5.0		4.270		118	80	120	0	0		

#### Qualifiers:

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

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

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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

# Sample Log-In Check List

Client Name: ENSOLUM A	ZTEC Work C	Order Number:	1912266		RcptNo	: 1
Received By: JUAN RO	DJAS 12/6/2019	9 8:00:00 AM				
Completed By: Erin Melenc	irez 12/6/2019	9 8:22:50 AM		ingua	7	
Reviewed By: ENM	1216	119				
Chain of Custody						
1. Is Chain of Custody sufficier	ntly complete?		Yes 🗸	No 🗌	Not Present	
2. How was the sample deliver	red?		Courier			
Log In						
3. Was an attempt made to coo	ol the samples?		Yes 🗸	No 🗌	NA 🗌	
4. Were all samples received a	t a temperature of >0° C to	6.0°C	Yes 🗸	No 🗌	NA 🗆	
5. Sample(s) in proper contained	er(s)?		Yes 🗸	No 🗌		
6. Sufficient sample volume for	indicated test(s)?		Yes 🗸	No 🗌		
7. Are samples (except VOA ar	nd ONG) properly preserved	?	Yes 🗸	No 🗌		
8. Was preservative added to b	ottles?		Yes	No 🗸	NA 🗌	
9. Received at least 1 vial with	headspace <1/4" for AQ VC	A?	Yes 🗌	No 🗌	NA 🗹	
10. Were any sample containers	s received broken?		Yes	No 🗸	# of preserved	
11. Does paperwork match bottle	e labels?		Yes 🗸	No 🗆	bottles checked for pH:	
(Note discrepancies on chair						r >12 unless noted)
12. Are matrices correctly identif	ied on Chain of Custody?		Yes 🔽	No 🗌	Adjusted?	
13. Is it clear what analyses were			Yes 🗹	No 📙	/	505
<ol><li>Were all holding times able t (If no, notify customer for aut</li></ol>			Yes 🗸	No 📙	Checked by:	DAD 12/6/19
Special Handling (if appli	icable)					
15. Was client notified of all disc			Yes 🗌	No 🗌	NA 🔽	
Person Notified:		Date:	And Annual a	THE PROPERTY OF THE PROPERTY O		
By Whom:	DELIVER OF THE PERSON OF THE P	Via:	eMail [	Phone Fax	In Person	= = =
Regarding:	and the second s					
Client Instructions:					A SERVICE CONTRACTOR SECURITY CONTRACTOR SECURITY SECURIT	
16. Additional remarks:						
17. Cooler Information						
Cooler No Temp °C	Condition   Seal Intact	Seal No Seal No	eal Date	Signed By		
1 3.4	Good Yes					

Receiv	ed by	, OC.	D: 8/	10/2	020	9:1	4:27 AN	1																	1	Page 50	of:	71
İ	ABORATORY		7109	2																		sil and a			2	So S	A A Sometimes report	Talyucal report.
	YSTSI	tuo.	4901 Hawkins NE - Albuquerque, NM 87109	10	Analysis		\$ <sup>'†</sup> 0d	827(	s F.,	310 etal NO .)	8 W 8 M; 74 AOY	EDB (M PAHs b CI, F, E 8260 (V 8270 (S	S.	9.	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Q	9	2	9	2	7	5	2	9	PM Ton long	F N WHY 236 5.11	29 L a	ביסווון מכובה ממומ שווו של היסמווץ ווטנמנסט טון גוופ מו
			4901 H	Tel. 50			SO / MR	N DR	90	(GF	<b>19</b> 1	\ X∃T8 08:H9T 69 1808	×	2 R	8	1 d d	N. K	J J	3 6	2.5	N N	ナナ	x 3	ノイケ	Remarks: p	A A	Nossibility Any su	possibility. Any on
Turn-Around Time:	□ Standard 🖄 Rush 🔑 🔄 🥱	.;	Lateral 2C-55	Project #:	0541336650	Project Manager:	K. Summers	r	On Ice: 🗗 Yes 🗆 No	# of Coolers: 1	Cooler Temp(including cF): 3,5-0.1=3.4	Container Preservative IQ 1720.6	1001		500-	-00-d	-00-	-000	-00-1	-003	-0.0	010-	-D(1	0-	Received by: Via: Date Time $\frac{12}{3}$	Via: Date Ti	f percessary samples submitted to Hall Environmental may be subconfracted to other accredited Jahoratories. This serves as notice of this noscibility. Any sub-contracted data will be clearly notated on the analytical renorm	טוון מנופט וני טעבי מענים מונים ומטים מניינים. יוווס פניינים מס ונינינים כי יווים
Chain-of-Custody Record	Client: Ensolvo		Mailing Address: Low SR in Cound	Suit A 87410	Phone #:	email or Fax#:	QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)	on:	□ NELAC □ Other	□ EDD (Type)		Date Time Matrix Sample Name		1 1/05 5 53	1110 5 5-3	1115 5 5-4	1120 3 5-5	1135 5 5-6	1130 5 5-7	1,35 5 5-8	1140 5 5-9	1145 5 5-10	1150 5 5-11	1.55	A	Relinquished by:	If necessary samples submitted to Hall Environmental may be subo	I lecessary, samples submitted to the control of th

Chain-of-Custody Record	Turn-Around Time: 1007	
Client: FnSo   UM	□ Standard	ANAI VSTS I ABODATOBY
Image	Project Name:	
Mailing Address: 606 S. Rio Grande	[Lateral 20-55	87109
	Project #:	5 Fax 505-345-4107
Phone #:	05A1226080	Analysis Request
email or Fax#:	Project Manager:	()()
QA/QC Package:		bO <sup>4</sup> ' 20 2IW2 bcB,2 O \ WK0
Accreditation:   Az Compliance  Compliance  Compliance  Compliance	Sampler: Chad D'Aponti	/ DR. 1) / 8082 / 8270 / A. 1) / S. 1
EDD (Type)	olers: \	GR(GR)
	Cooler Temp(including CF): 3,5-0-(=3.4	etho etho y 83 Me r, <i>N</i> (AO)
Date Time Matrix Sample Name	Container Preservative HEAL No. Type Type	BTEX / 8081 Pe 8081 Pe CI, F <del>, B</del> 8260 (V 8270 (S Total Co
17/5/19 500 5 5-13	1001 -UZ	×
12/19 1205 S S-14	2	×
Date: Time: Relinanished hv:	H SPO	
19 1547	1 Walk 145/4 1542	Long
Date: Time: Relinquished by: 12/5/15 17/16	Via:	Pay Key # RB2)200 Janay 88
necessary, samples submitted to Hall Env		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

December 17, 2019

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

**FAX** 

RE: Lateral 2C 55 OrderNo.: 1912768

### Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/14/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 12/17/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-15

 Project:
 Lateral 2C 55
 Collection Date: 12/13/2019 10:00:00 AM

 Lab ID:
 1912768-001
 Matrix: SOIL
 Received Date: 12/14/2019 10:15:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch
EPA METHOD 300.0: ANIONS					Analyst: CJS
Chloride	ND	60	mg/Kg	20	12/16/2019 12:02:01 PM 49353
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	12/16/2019 12:11:38 PM 49351
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/16/2019 12:11:38 PM 49351
Surr: DNOP	85.5	70-130	%Rec	1	12/16/2019 12:11:38 PM 49351
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	21	mg/Kg	5	12/16/2019 9:27:31 AM G65198
Surr: BFB	86.7	66.6-105	%Rec	5	12/16/2019 9:27:31 AM G65198
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.11	mg/Kg	5	12/16/2019 9:27:31 AM B65198
Toluene	ND	0.21	mg/Kg	5	12/16/2019 9:27:31 AM B65198
Ethylbenzene	ND	0.21	mg/Kg	5	12/16/2019 9:27:31 AM B65198
Xylenes, Total	ND	0.43	mg/Kg	5	12/16/2019 9:27:31 AM B65198
Surr: 4-Bromofluorobenzene	105	80-120	%Rec	5	12/16/2019 9:27:31 AM B65198

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

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

Page 1 of 9

Date Reported: 12/17/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-16

 Project:
 Lateral 2C 55
 Collection Date: 12/13/2019 10:05:00 AM

 Lab ID:
 1912768-002
 Matrix: SOIL
 Received Date: 12/14/2019 10:15:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch
EPA METHOD 300.0: ANIONS					Analyst: CJS
Chloride	ND	60	mg/Kg	20	12/16/2019 12:14:23 PM 49353
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	10	9.7	mg/Kg	1	12/16/2019 12:20:54 PM 49351
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/16/2019 12:20:54 PM 49351
Surr: DNOP	80.8	70-130	%Rec	1	12/16/2019 12:20:54 PM 49351
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	40	mg/Kg	5	12/16/2019 9:50:15 AM G65198
Surr: BFB	85.7	66.6-105	%Rec	5	12/16/2019 9:50:15 AM G65198
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.20	mg/Kg	5	12/16/2019 9:50:15 AM B65198
Toluene	ND	0.40	mg/Kg	5	12/16/2019 9:50:15 AM B65198
Ethylbenzene	ND	0.40	mg/Kg	5	12/16/2019 9:50:15 AM B65198
Xylenes, Total	ND	0.80	mg/Kg	5	12/16/2019 9:50:15 AM B65198
Surr: 4-Bromofluorobenzene	104	80-120	%Rec	5	12/16/2019 9:50:15 AM B65198

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 9

Date Reported: 12/17/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-17

 Project:
 Lateral 2C 55
 Collection Date: 12/13/2019 10:10:00 AM

 Lab ID:
 1912768-003
 Matrix: SOIL
 Received Date: 12/14/2019 10:15:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed Ba	atch
EPA METHOD 300.0: ANIONS					Analyst: C	JS
Chloride	ND	60	mg/Kg	20	12/16/2019 12:26:44 PM 49	9353
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: B	RM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/16/2019 12:30:08 PM 49	9351
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/16/2019 12:30:08 PM 49	9351
Surr: DNOP	80.5	70-130	%Rec	1	12/16/2019 12:30:08 PM 49	9351
EPA METHOD 8015D: GASOLINE RANGE					Analyst: N	SB
Gasoline Range Organics (GRO)	ND	30	mg/Kg	5	12/16/2019 10:13:06 AM G	65198
Surr: BFB	81.1	66.6-105	%Rec	5	12/16/2019 10:13:06 AM G	65198
EPA METHOD 8021B: VOLATILES					Analyst: N	SB
Benzene	ND	0.15	mg/Kg	5	12/16/2019 10:13:06 AM B	65198
Toluene	ND	0.30	mg/Kg	5	12/16/2019 10:13:06 AM B	65198
Ethylbenzene	ND	0.30	mg/Kg	5	12/16/2019 10:13:06 AM B	65198
Xylenes, Total	ND	0.60	mg/Kg	5	12/16/2019 10:13:06 AM B	65198
Surr: 4-Bromofluorobenzene	97.7	80-120	%Rec	5	12/16/2019 10:13:06 AM B	65198

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: 12/17/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM Client Sample ID: S-18

 Project:
 Lateral 2C 55
 Collection Date: 12/13/2019 10:15:00 AM

 Lab ID:
 1912768-004
 Matrix: SOIL
 Received Date: 12/14/2019 10:15:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed Batch
EPA METHOD 300.0: ANIONS					Analyst: <b>CJS</b>
Chloride	ND	60	mg/Kg	20	12/16/2019 12:39:05 PM 49353
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/16/2019 12:39:27 PM 49351
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/16/2019 12:39:27 PM 49351
Surr: DNOP	81.5	70-130	%Rec	1	12/16/2019 12:39:27 PM 49351
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	19	mg/Kg	5	12/16/2019 10:35:50 AM G65198
Surr: BFB	77.6	66.6-105	%Rec	5	12/16/2019 10:35:50 AM G65198
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.096	mg/Kg	5	12/16/2019 10:35:50 AM B65198
Toluene	ND	0.19	mg/Kg	5	12/16/2019 10:35:50 AM B65198
Ethylbenzene	ND	0.19	mg/Kg	5	12/16/2019 10:35:50 AM B65198
Xylenes, Total	ND	0.38	mg/Kg	5	12/16/2019 10:35:50 AM B65198
Surr: 4-Bromofluorobenzene	94.5	80-120	%Rec	5	12/16/2019 10:35:50 AM B65198

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 4 of 9

### Hall Environmental Analysis Laboratory, Inc.

WO#: **1912768** *17-Dec-19* 

Client: ENSOLUM
Project: Lateral 2C 55

Sample ID: MB-49353 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 49353 RunNo: 65201

Prep Date: 12/16/2019 Analysis Date: 12/16/2019 SeqNo: 2239011 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-49353 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 49353 RunNo: 65201

Prep Date: 12/16/2019 Analysis Date: 12/16/2019 SeqNo: 2239012 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 96.3 90 110

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **1912768** 

17-Dec-19

Client: ENSOLUM
Project: Lateral 2C 55

Sample ID: LCS-49351	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 49351			F	RunNo: 6							
Prep Date: 12/16/2019	Analysis D	ate: 12	2/16/2019	S	SeqNo: 2	238107	Units: mg/k	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	46	10	50.00	0	91.9	63.9	124					
Surr: DNOP	4.0		5.000		79.3	70	130					
Sample ID: <b>MB-49351</b>	SampType: <b>MBLK</b>			TestCode: EPA Method 8015M/D: Diesel Range Organics								

,	•	, ,						9	9	
Client ID: PBS	Batch	ID: <b>49</b> :	351	R	RunNo: 6	5199				
Prep Date: 12/16/2019	Analysis D	ate: 12	2/16/2019	S	SeqNo: 2	238108	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		82.1	70	130			

Sample ID: 1912768-001AMS	SampType: <b>MS</b>			TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: S-15	Batch	ID: <b>49</b>	351	R	tunNo: 6	5199						
Prep Date: 12/16/2019	Analysis D	ate: 12	2/16/2019	S	SeqNo: 2	238608	Units: mg/k	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	51	9.7	48.36	5.785	92.7	57	142					
Surr: DNOP	5.0		4.836		104	70	130					

Sample ID: 1912768-001AMSD	SampT	SampType: MSD			TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: S-15	Batch	ID: <b>49</b> :	351	R	tunNo: 6	5199							
Prep Date: 12/16/2019	Analysis D	ate: 12	2/16/2019	S	SeqNo: 22	238609	Units: mg/K	(g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Diesel Range Organics (DRO)	48	9.8	49.21	5.785	85.2	57	142	5.87	20				
Surr: DNOP	42		4 921		86.4	70	130	0	Λ				

### 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.

WO#: **1912768** 

17-Dec-19

Client:	ENSOLUM
Project:	Lateral 2C 55

Project: Lateral	2C 55									
Sample ID: rb	SampTy	/pe: <b>ME</b>	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID: PBS	Batch	ID: <b>G6</b>	5198	R	RunNo: 6	5198				
Prep Date:	Analysis Da	ate: 12	2/16/2019	S	SeqNo: 2	238489	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	1000		07.0	00.0	405			
Surr: BFB	880		1000		87.8	66.6	105			
Sample ID: 2.5ug gro lcs	SampTy	pe: <b>LC</b>	s	Test	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: LCSS	Batch	ID: G6	5198	R	RunNo: 6	5198				
Prep Date:	Analysis Da	ate: 12	2/16/2019	S	SeqNo: 2	238490	Units: mg/k	(g		
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.9	80	120			
Surr: BFB	980		1000		98.4	66.6	105			
Sample ID: 1912768-001am	<b>s</b> SampTy	pe: <b>MS</b>	3	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: S-15	Batch	ID: <b>G6</b>	5198	R	RunNo: 6	5198				
Prep Date:	Analysis Da	ate: 12	2/16/2019	S	SeqNo: 2	238491	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	91	21	106.8	0	85.5	69.1	142			
Surr: BFB	3800		4270		89.7	66.6	105			
Sample ID: 1912768-001am	sd SampTy	pe: <b>MS</b>	SD	Test	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: S-15	Batch	ID: G6	5198	R	RunNo: 6	5198				
Prep Date:	Analysis Da	ate: 12	2/16/2019	S	SeqNo: 2	238492	Units: mg/k	<b>(</b> g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	89	21	106.8	0	83.7	69.1	142	2.08	20	
Surr: BFB	3800		4270		88.8	66.6	105	0	0	
Sample ID: <b>mb-49336</b>	SampTy	/pe: <b>ME</b>	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: PBS	Batch	ID: <b>49</b>	336	R	RunNo: 6	5198				
Prep Date: 12/13/2019	Analysis Da	ate: 12	2/16/2019	S	SeqNo: 2	238493	Units: %Re	С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	860		1000		85.6	66.6	105			
Sample ID: Ics-49336	SampTy	pe: <b>LC</b>	ss	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID: LCSS	Batch	ID: <b>49</b> :	336	R	RunNo: 6	5198		_		
Prep Date: 12/13/2019	Analysis Da	ate: 12	2/16/2019	S	SeqNo: 2	238494	Units: %Re	С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

### Qualifiers:

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

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

Page 7 of 9

### Hall Environmental Analysis Laboratory, Inc.

WO#: **1912768** 

17-Dec-19

Client: ENSOLUM
Project: Lateral 2C 55

Sample ID: rb SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: **B65198** RunNo: 65198 Prep Date: Analysis Date: 12/16/2019 SeqNo: 2238521 Units: mq/Kq SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte PQL LowLimit HighLimit Qual Benzene ND 0.025 Toluene ND 0.050 0.050 Ethylbenzene ND Xylenes, Total ND 0.10 Surr: 4-Bromofluorobenzene 1.1 1.000 109 80 120

Sample ID: 100ng btex Ics SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: **B65198** RunNo: 65198 Prep Date: Analysis Date: 12/16/2019 SeqNo: 2238522 Units: mg/Kg Analyte PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 1.000 0.93 0.025 n 93.3 80 120 Benzene Toluene 0.93 0.050 1.000 0 93.1 80 120 0 94.2 80 Ethylbenzene 0.94 0.050 1.000 120 0 94.0 Xylenes, Total 2.8 0.10 3.000 80 120 Surr: 4-Bromofluorobenzene 1.1 1.000 109 80 120

Sample ID: 1912768-002ams SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: S-16 Batch ID: **B65198** RunNo: 65198 Prep Date: Analysis Date: 12/16/2019 SeqNo: 2238523 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.20 8.039 94.0 76 7.6 n 123 Benzene Toluene 7.6 0.40 8.039 0.05675 93.3 80.3 127 7.5 93.1 80.2 131 Ethylbenzene 0.40 8.039 0 Xylenes, Total 23 0.80 24.12 0 93.5 78 133 Surr: 4-Bromofluorobenzene 80 8.5 8.039 106 120

TestCode: EPA Method 8021B: Volatiles Sample ID: 1912768-002amsd SampType: MSD Client ID: S-16 Batch ID: **B65198** RunNo: 65198 Prep Date: Analysis Date: 12/17/2019 SeqNo: 2238524 Units: mg/Kg SPK value SPK Ref Val %REC **RPDLimit** Analyte Result PQL LowLimit HighLimit %RPD Qual 7.3 0.20 8.039 0 90.6 76 123 3.68 20 Benzene Toluene 7.3 0.40 8.039 0.05675 89.6 80.3 127 3.97 20 Ethylbenzene 7.3 0.40 8.039 0 90.3 80.2 131 3.05 20 Xylenes, Total 22 0.80 24.12 0 90.3 78 133 3.42 20 Surr: 4-Bromofluorobenzene 8.2 8.039 103 80 120 0 0

### Qualifiers:

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

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

Page 8 of 9

### Hall Environmental Analysis Laboratory, Inc.

WO#: **1912768** 

17-Dec-19

Client: ENSOLUM
Project: Lateral 2C 55

Sample ID: mb-49336 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 49336 RunNo: 65198

Prep Date: 12/13/2019 Analysis Date: 12/16/2019 SeqNo: 2238525 Units: %Rec

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

Surr: 4-Bromofluorobenzene 1.1 1.000 105 80 120

Sample ID: LCS-49336 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 49336 RunNo: 65198

Prep Date: 12/13/2019 Analysis Date: 12/16/2019 SeqNo: 2238526 Units: %Rec

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

Surr: 4-Bromofluorobenzene 0.92 1.000 91.8 80 120

#### Qualifiers:

\* Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 9 of 9



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name:	ENSOLUM AZTEC	Work Order Nu	mber: 1912768		RcptNo:	1
Received By:	Anne Thorne	12/14/2019 10:15	5:00 AM	an II.	~	
Completed By:	Anne Thorne	12/16/2019 7:34:	22 AM	Arne Sha	_	
Reviewed By: j	DAD 12/16/19	·		Une Stra	~	
Chain of Cus	tody.					
	ustody sufficiently complete	?	Yes 🗸	No 🗀	Not Present	
	sample delivered?	•	<u>Courier</u>	NO 🗀	Not Flesellt	
<u>Log In</u>						
	npt made to cool the sample	es?	Yes 🗹	No 🗔	NA 🗆	
4. Were all samp	oles received at a temperatu	ure 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 tes	t(s)?	Yes 🔽	No 🗌		
	except VOA and ONG) prop		Yes 🗸	No 🗌		
8. Was preservat	ive added to bottles?		Yes	No 🗹	NA 🗌	
9. Received at lea	ast 1 vial with headspace <	1/4" for AQ VOA?	Yes 🗀	No 🗔	NA 🗹	
	ple containers received bro		Yes	No 🔽	# of preserved	
	rk match bottle labels? ncies on chain of custody)	4	Yes 🗹	No 🗆	bottles checked for pH:	12 uniess noted)
	orrectly identified on Chain	of Custody?	Yes 🔽	No 🗆	Adjusted?	242 dilless floted)
	analyses were requested?		Yes 🗸	No 🗆	Manufacture and Service.	
	g times able to be met? stomer for authorization.)		Yes 🔽	No 🗆	Checked by:	-12/16/19
Special Handli	ng (if applicable)					
15. Was client noti	ified of all discrepancies wit	h this order?	Yes 🗌	No 🗌	NA 🗹	•
Person N	Notified:	Date		-		
By Whon	n:	. Via:	☐ eMail ☐ Ph	none 🗌 Fax [	In Person	
Regardin	- 8					
Client Ins	structions:					
16. Additional rem	arks:		<u>-</u>			
CUSTOD	Y SEALS INTACT ON SOI	L JARS/at 12/14.19				
17. <u>Cooler Inform</u> Cooler No	Temp ℃ Condition	Seal Intact   Seal No	Seal Date S	Signed By		
<u>. – – – –                              </u>	<del> </del>	<del> </del>				

Chain-of-Custody Record	Turn-Around Time:		1000	_												Rece
Client: Freshow	Standard	Rush 6	9-16-19	L i			Ì	HALL	Ξ,	<b>&gt;</b>		ENVIRONMENT	Σ	Z	K	ived
	Project Name:	lienvi A					4	ANALYSIS	<b>S</b>	S		LABORATOR	Š	Ĕ	K	by O
Mailing Address: 101 CB South	Letua	1 20-5	h		5	- - -	<b>^</b>	w.ha	llenvi	ronm	www.hallenvironmental.com	.com	! !			CD:
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	ASO	1336080	8		<u>ט</u>		505-545-5975	0.780	Analysis		505-345 Secures	505-345-4107 Pormest	<u>`</u>			/202
email or Fax#:	Project Manager	٠, ١		(	(	-			<b>†</b> (		\	7				9:
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1918/1817 Mounts Wall Environmental marker of some			1011		4	M.	A	7 1	868 WW.	4				3	3	ge 63 of
	contracted to other accredit	ed laboratories. Tris	ted raboratories. Ints serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical repor	gissod :	lity. Any	γsub-ας	ntracte	data v	⊯ þe त	early n	otated o	in the an	alytical	report.		71



**APPENDIX G** 

Regulatory Correspondence

From: Smith, Cory, EMNRD

To: Long, Thomas; kwchristesen@blm.gov

Cc: Stone, Brian

**Subject:** RE: Lateral 2C-55 - UL C Section 30 T25N R7W; 36.378303, -107.616105

Date: Wednesday, December 4, 2019 7:10:22 AM

Tom,

OCD approves of the below Sampling plan, Please include this approval in your final report.

Thank you,

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

**From:** Long, Thomas <tjlong@eprod.com> **Sent:** Tuesday, December 3, 2019 3:03 PM

**To:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; kwchristesen@blm.gov

**Cc:** Stone, Brian <br/> <br/> bmstone@eprod.com>

**Subject:** [EXT] Lateral 2C-55 - UL C Section 30 T25N R7W; 36.378303, -107.616105

Cory/Kenneth,

Enterprise would like to request an alternate sampling interval from the required 200 square foot soil sampling interval . The proposed sampling is the following:

- 1. 4 (0-9' and 9-18') 5 point composite from each of the long walls (east and west walls). Four samples total from each long wall.
- 2. 2 Base samples
- 3. 2(0-9' and 9-18') 5 point composite from each of the short walls (north and south). Two samples total from each short wall.

I have attached a picture and site sketch. Please acknowledge if you agree with this proposed sampling interval.

If you have any questions, please call or email.

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



From: Chad D'Aponti < <a href="mailto:cdaponti@ensolum.com">cdaponti@ensolum.com</a>>
Sent: Tuesday, December 3, 2019 2:31 PM

**To:** Long, Thomas < tilong@eprod.com>

**Cc:** Kyle Summers < ksummers@ensolum.com>

**Subject:** Lateral 2C-55

Attached is the site drawing with proposed sample locations, we are looking at 14 samples all together.

Let me know if you would like to sample any different.

L-33'

W-20'

D-18'

### Chad D'Aponti

Ensolum, LLC | Environmental & Hydrogeologic Consultants 606 South Rio Grande, Suite A | Aztec, NM 87410 970.216.5235

cdaponti@ensolum.com
www.ensolum.com



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

From: Long, Thomas

To: "Smith, Cory, EMNRD (Cory, Smith@state.nm.us)"; kwchristesen@blm.gov
Cc: Stone, Brian; Abbott, Patrick

 Subject:
 FW: Lateral 2C-55 - UL C Section 30 T25N R7W; 36.378303, -107.616105

 Attachments:
 Lat 2C-55 Site Drawing 3.pdf

Lateral 2C 55.pdf

Rpt 1912266 Lateral 2C 55 Final v1.pdf

#### Cory/Kenneth,

Please find the attached site sketch and lab reports for the Lateral 2C-55 excavation. All samples results are below NMOCD Tier I standards. Enterprise will backfill the excavation with clean imported fill material. If you have any questions, please call or email.

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



From: Long, Thomas <tjlong@eprod.com> Sent: Friday, December 13, 2019 7:19 AM

To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>

**Subject:** Re: Lateral 2C-55 - UL C Section 30 T25N R7W; 36.378303, -107.616105

Cory/Kenneth,

We will be collecting four samples today.

Tom Long

On Dec 13, 2019, at 7:14 AM, Smith, Cory, EMNRD < Cory.Smith@state.nm.us > wrote:

Tom,

How many samples are expected to be collected today?

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

From: Long, Thomas < tilong@eprod.com>
Sent: Thursday, December 12, 2019 11:55 AM

To: Smith, Cory, EMNRD < Cory. Smith@state.nm.us>; kwchristesen@blm.gov

Cc: Stone, Brian < bmstone@eprod.com>

Subject: [EXT] Fwd: Lateral 2C-55 - UL C Section 30 T25N R7W; 36.378303, -107.616105

Cory/Kenneth,

This email is to notify you that Enterprise will be collecting soil samples for laboratory analysis at the Lateral 2C-55 excavation tomorrow, December 13, 2019 at 10:00 a.m. If you have any questions, please call or email.

Tom Long

Begin forwarded message:

From: "Long, Thomas" < tilong@eprod.com > Date: December 4, 2019 at 7:28:00 AM MST

To: "Smith, Cory, EMNRD" < Cory. Smith@state.nm.us>, "kwchristesen@blm.gov" < kwchristesen@blm.gov>

Cc: "Stone, Brian" < bmstone@eprod.com>

Subject: RE: Lateral 2C-55 - UL C Section 30 T25N R7W; 36.378303, -107.616105

Cory/Kenneth,

We will not be sampling today as that the weather has created adverse road conditions. We will attempt to sample tomorrow December 5, 2019 at 11:00 a.m. If you have any questions, please all or email.

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

[logo]

From: Smith, Cory, EMNRD < <a href="mailto:Cory.Smith@state.nm.us">Cory.Smith@state.nm.us</a>>

Sent: Wednesday, December 4, 2019 7:10 AM

To: Long, Thomas  $<\underline{tjlong@eprod.com}>$ ;  $\underline{kwchristesen@blm.gov}$ 

Cc: Stone, Brian < bmstone@eprod.com>

Subject: RE: Lateral 2C-55 - UL C Section 30 T25N R7W; 36.378303, -107.616105

Tom,

OCD approves of the below Sampling plan, Please include this approval in your final report.

Thank you,

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

From: Long, Thomas <tilong@eprod.com<mailto:tilong@eprod.com>>

Sent: Tuesday, December 3, 2019 3:03 PM

To: Smith, Cory, EMNRD < Cory.Smith@state.nm.us < mailto: Cory.Smith@state.nm.us >>;

kwchristesen@blm.gov<mailto:kwchristesen@blm.gov>

Cc: Stone, Brian < bmstone@eprod.com < mailto:bmstone@eprod.com >>

Subject: [EXT] Lateral 2C-55 - UL C Section 30 T25N R7W; 36.378303, -107.616105

Cory/Kenneth,

Enterprise would like to request an alternate sampling interval from the required 200 square foot soil sampling interval. The proposed sampling is the following:

- 1.  $4 (0-9' \text{ and } 9-18') 5 \text{ point composite from each of the long walls (east and west walls). Four samples total from each long wall.$
- 2. 2 Base samples
- 3. 2 (0-9') and 9-18' -5 point composite from each of the short walls (north and south). Two samples total from each short wall.

I have attached a picture and site sketch. Please acknowledge if you agree with this proposed sampling interval.

If you have any questions, please call or email.

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

[logo]

From: Chad D'Aponti < cdaponti@ensolum.com < mailto:cdaponti@ensolum.com >>>

Sent: Tuesday, December 3, 2019 2:31 PM

To: Long, Thomas <tilong@eprod.com<mailto:tilong@eprod.com>>>

Cc: Kyle Summers < ksummers@ensolum.com < mailto:ksummers@ensolum.com >>>

Subject: Lateral 2C-55

Attached is the site drawing with proposed sample locations, we are looking at 14 samples all together.

Let me know if you would like to sample any different.

L-33'

W-20'

D-18'

Chad D'Aponti

Ensolum, LLC  $\mid$  Environmental & Hydrogeologic Consultants 606 South Rio Grande, Suite A  $\mid$  Aztec, NM 87410

970.216.5235

cdaponti@ensolum.com<mailto:cdaponti@ensolum.com>

www.ensolum.com<https://urldefense.proofpoint.com/v2/url?u=http-

3A <u>www.ensolum.com_&amp;d=DwMFAg&amp;c=6zpojTjipf-</u>
nAlEmob0p1NKp0XhcK4lau5zCDf5n3i4&r=ddvZ1T9a_VnOax5oP1jlng&m=Pnns9qTx5mafiYQF1fhqhgvDvGveKBzsrxfT1i9Uc
k&s=CCum9-nwAN5kAz1asZZMrhADrQuA7uB36SdBtKhyA8w&e=>

[Ensolum - Report Logo - Header]

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District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 9573

### **CONDITIONS**

Operator:	OGRID:
Enterprise Field Services, LLC	241602
PO Box 4324	Action Number:
Houston, TX 77210	9573
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
kcollins	None	7/16/2021