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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	**Incident #** *(assigned by OCD)*: **NCE2003538771**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.549324** Longitude **-107.736168** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Lateral C-7 Loop Pipeline**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **01/08/2020**	Serial Number *(if applicable)*:) **N/A**

Unit Letter	Section	Township	Range	County
G	**25**	**27N**	**9W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **5-7 BBLS**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **22 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On January 8, 2020, Enterprise discovered a natural gas release on the Lateral C-7 Loop pipeline. No fluids were released to the ground surface. The pipeline was blown down, depressurized, locked out and tagged out. The release was located in an ephemeral wash (a blue line on a USGS Topo Map). Remediation was completed on January 23, 2020. The final excavation dimensions measured approximately 30 feet long by 16 feet wide by approximately 15.5 feet deep. Approximately 96 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this "Final." C-141.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

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

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

☒ Description of remediation activities

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

Printed Name: Jon E. Fields Title: Director, Environmental

Signature: Jon E. Fields Date: 10/28/2020

email: jefields@eprod.com Telephone: (713) 381-6684

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Nelson Velez Date: 05/16/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

CLOSURE REPORT

Property:

Lateral C-7 Loop Pipeline Release
NE ¼, S25 T27N R9W
San Juan County, New Mexico

September 18, 2020
Ensolum Project No. 05A1226087

Prepared for:

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

Prepared by:

Ranee Deechilly
Environmental Scientist

Kyle Summers, CPG
Sr. Project Manager

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Table of Contents

LIST OF APPENDICES

ENSOLUM

CLOSURE REPORT

Lateral C-7 Loop Pipeline Release
NE ¼, S25 T27N R9W
San Juan County, New Mexico

Ensolum Project No. 05A1226087

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Lateral C-7 Loop Pipeline Release (Site)
Location:	36.549324° North, 107.736168° West Northeast (NE) ¼ of Section 25, Township 27 North, Range 9 West San Juan County, New Mexico
Property:	Navajo Nation
Regulatory:	Navajo Nation Environmental Protection Agency (NNEPA) and New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On January 8, 2020, a release of natural gas was identified on the Lateral C-7 Loop pipeline. Enterprise subsequently isolated and locked the pipeline out of service. On January 14, 2020, Enterprise initiated activities to facilitate the repair of the pipeline and remediate potential petroleum hydrocarbon impact resulting from the release.

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

1.2 Project Objective

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

2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the NNEPA and the New Mexico EMNRD OCD. Ensolum, LLC (Ensolum) referenced New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action, during the evaluation and remediation of the Site. Ensolum utilized the general site characteristics and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD imaging database to determine the appropriate closure criteria for the Site. Supporting figures and documentation associated with the following bullets are provided in **Appendix B**.

- The OSE tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable

and includes an interactive map). No PODs were identified within a one-mile radius of the Site in the OSE WRRS database. In addition, no PODs were identified in adjacent Sections.

- One (1) cathodic protection well was identified within a mile of the Site. The cathodic protection well associated with the Huerfanito Unit #10, #178, #151 oil/gas production wells (Unit A, Sec 36 T27N R9W), located approximately 0.9 miles south of the Site and at a higher elevation (6,135 feet) than the Site (6,119 feet), indicates a depth to water of approximately 25 feet below grade surface (bgs).
- 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 55 feet north of the excavation.
- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake.
- The Site is not located within 300 feet of a permanent residence, school, hospital, institution, or church.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were identified within 1,000 feet of the Site.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to New Mexico Statutes Annotated (NMSA) 1978, Section 3-27-3.
- Based on information identified in the U.S. Fish & Wildlife Service National Wetlands Inventory Wetlands Mapper, the Site is not located within 300 feet of a wetland.
- Based on information identified in the New Mexico Mining and Minerals Division's Geographic Information System (GIS), Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- The Site is not located within an unstable area.
- Based on information identified in the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is not located within a 100-year floodplain.

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

Closure Criteria for Soils Impacted by a Release		
Constituent	Method	Limit
Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
TPH (GRO+DRO+MRO)	EPA SW-846 Method 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 January 14, 2020, Enterprise initiated activities to facilitate the repair of the pipeline and remediate petroleum hydrocarbon impact. During the remediation and corrective action activities, Halo Services, Inc. provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 30 feet long and 16 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 15.5 feet bgs.

The lithology encountered during the completion of remediation activities consisted primarily of unconsolidated silty sand.

A total of approximately 96 cubic yards of petroleum hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix C**. The excavation will be backfilled with a combination of imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils and then contoured to the surrounding grade.

Figure 3 (**Appendix A**) is a map that identifies approximate soil sample locations and depicts the approximate dimensions of the excavation with respect to the pipeline (**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 system and a photoionization detector (PID) fitted with a 10.6 eV lamp to guide excavation extents.

Ensolum's soil sampling program included the collection of 21 composite soil samples (S-1 through S-21), comprised of five (5) aliquots each, from the excavation for laboratory analysis. In addition, two (2) composite soil samples (SP-1 and SP-2) were collected from the soils that were segregated for potential reuse, to confirm the material was suitable to remain on Site. A clean shovel was utilized to obtain fresh aliquots from each accessible area of the excavation. An excavator was utilized to obtain fresh aliquots from areas of the excavation that exceeded depths greater than 10 feet bgs. Regulatory correspondence is provided in **Appendix G**.

First Sampling Event
On January 15, 2020, the initial pipeline repair excavation was sampled. Composite soil samples S-1 (10'), S-2 (10'), and S-10 (9') were collected from the floor of the excavation. Composite soil samples S-3 (0'-10'), S-4 (0'-10'), S-5 (0'-10'), S-6 (0'-10'), S-7 (0'-10'), S-8 (0'-9'), S-9 (0'-7'), S-11 (0'-5'), S-12 (0'-7'), S-13 (0'-9'), and S-14 (0'-10') were collected from the sidewalls of the initial repair-excavation. The floor on the southern portion of the excavation was not sampled during this sampling event because additional excavation was deemed necessary in that area.

Second Sampling Event
On January 17, 2020, a second sampling event was performed. Composite soil samples S-15 (14') and S-16 (14') were collected from the floor of the southern portion of the excavation. Composite soil samples S-17 (10'-14'), S-18 (10'-14'), S-19 (10'-14'), and S-20 (10'-14') were collected from the lower portion of the newly exposed sidewalls. The analytical results indicated that the chloride concentration in sample S-16 exceeded the New Mexico EMNRD OCD closure criteria. In response to that exceedance, Enterprise deepened the excavation and removed the soil associated with composite sample S-16. Removed soils were transported to the landfarm for disposal and remediation.

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Third Sampling Event
After additional excavation, a third sampling event was performed on January 23, 2020. Composite soil sample S-21 (15.5') was collected from the floor of the excavation to replace composite soil sample S-16, which was removed by excavation due to elevated chlorides.

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

5.0 SOIL LABORATORY ANALYTICAL METHODS

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

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

6.0 DATA EVALUATION

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results or laboratory supplied practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (S-1 through S-15, S-17 through S-21, SP-1, and SP-2) to the applicable New Mexico EMNRD OCD closure criteria. Soil associated with composite soil sample S-16 was transported to Envirotech landfarm for disposal/remediation and is not included in the following discussion.

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

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

- The laboratory analytical result for composite soil sample S-14 indicates a combined TPH GRO/DRO/MRO concentration of 12 mg/kg, which does not exceed the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site indicate TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for the composite soil samples collected from soils remaining at the Site indicate chloride concentrations ranging from below laboratory PQLs/RLs to 590 mg/kg (S-15), which are less than the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg for chlorides.

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

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7.0 RECLAMATION AND REVEGETATION

Due to the international novel coronavirus, Enterprise has been unable to obtain suitable pipe to complete pipeline repairs. Once the pipeline repairs are completed, Enterprise will backfill the excavation with a combination of imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils and then contoured to the surrounding grade. Enterprise will re-seed the Site with an approved seeding mixture.

8.0 FINDINGS AND RECOMMENDATION

- A total of 21 composite soil samples were collected from the excavation. In addition, two (2) composite soil samples were collected from segregated stockpiled soils. Based on laboratory analytical results, the soils remaining in place at the Site do not exhibit COC concentrations above the applicable New Mexico EMNRD OCD closure criteria.

- A total of approximately 96 cubic yards of petroleum hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. A combination of imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils will be used to backfill the excavation. The excavation will then be contoured to the 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 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 report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

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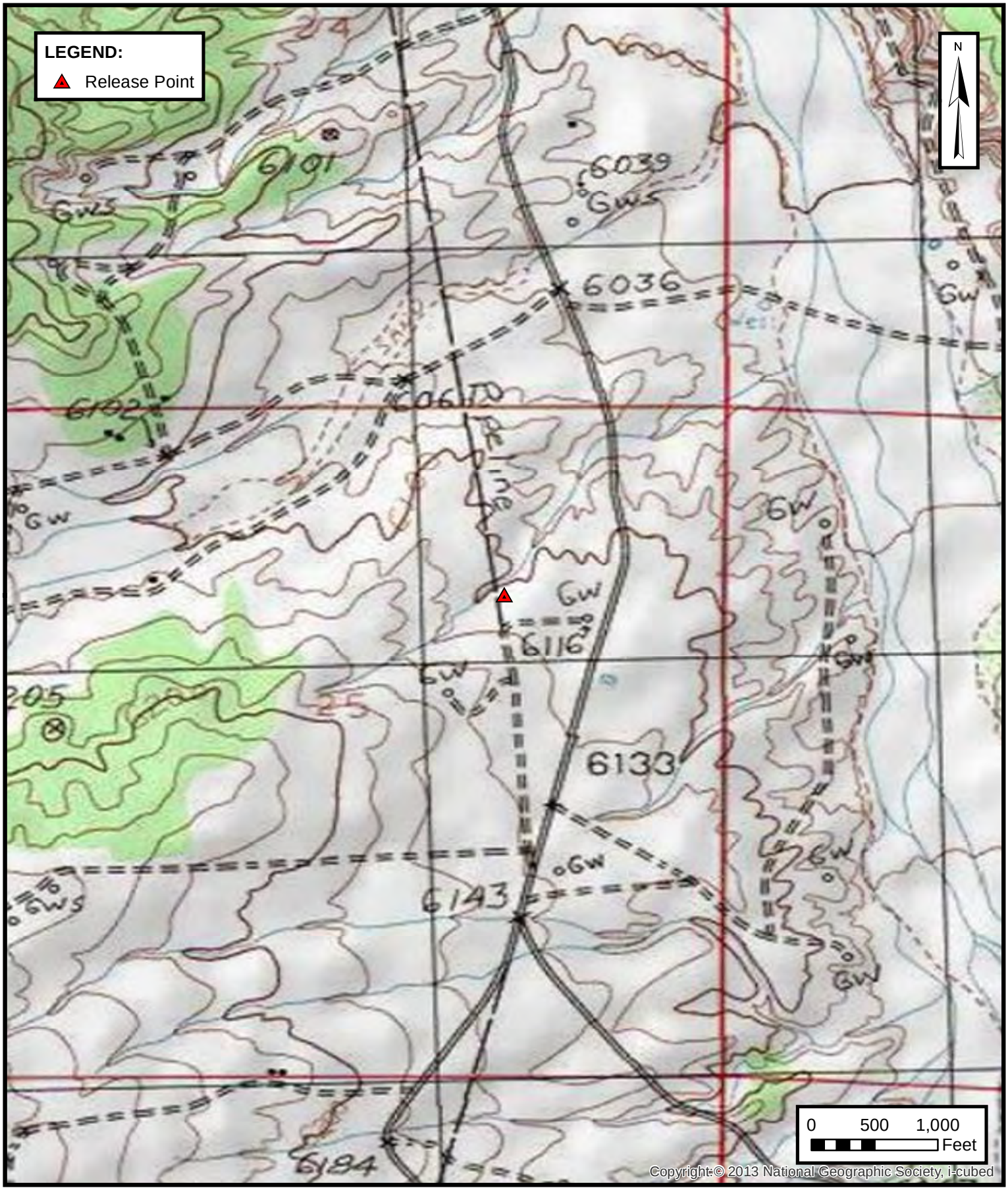
ENSOLUM

APPENDIX A

Figures



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Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W
Ensolum Project No.: 05A1226087

FIGURE
1

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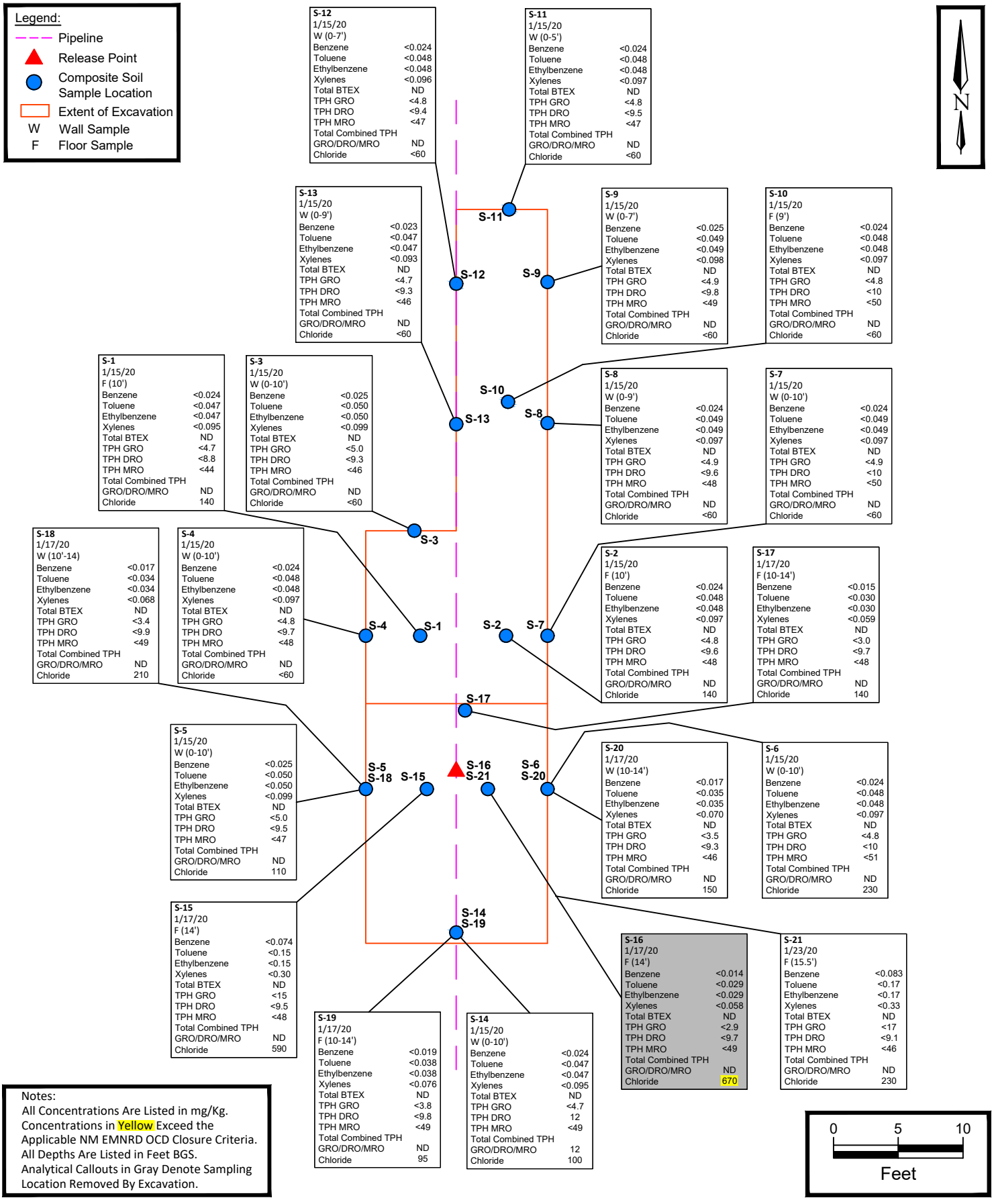
Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W
Ensolum Project No.: 05A1226087

FIGURE
2



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SITE MAP WITH SOIL ANALYTICAL RESULTS

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168°W

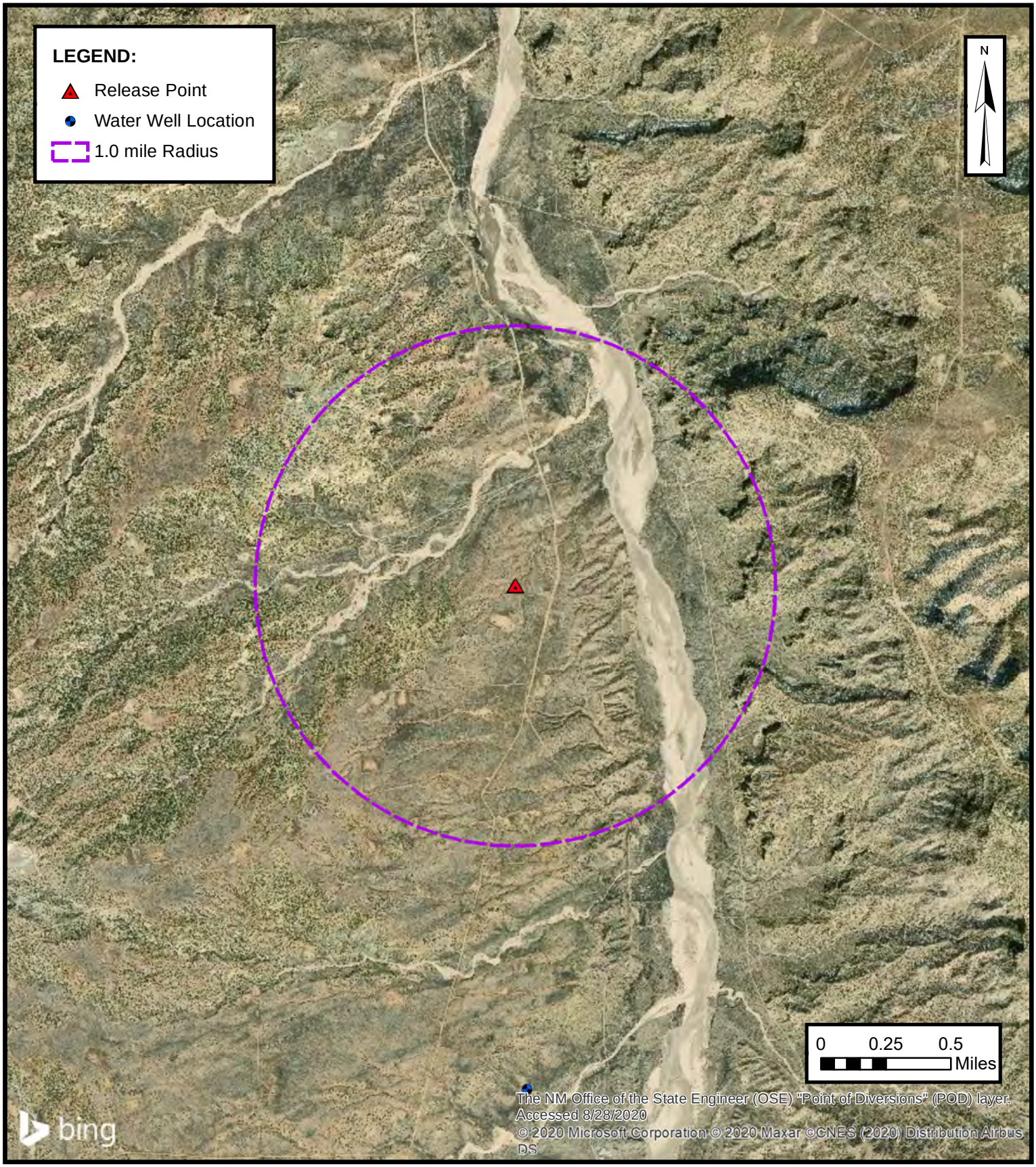
Ensolum Project No.: 05A1226087

FIGURE
3

ENSOLUM

APPENDIX B

Siting Figures and Documentation



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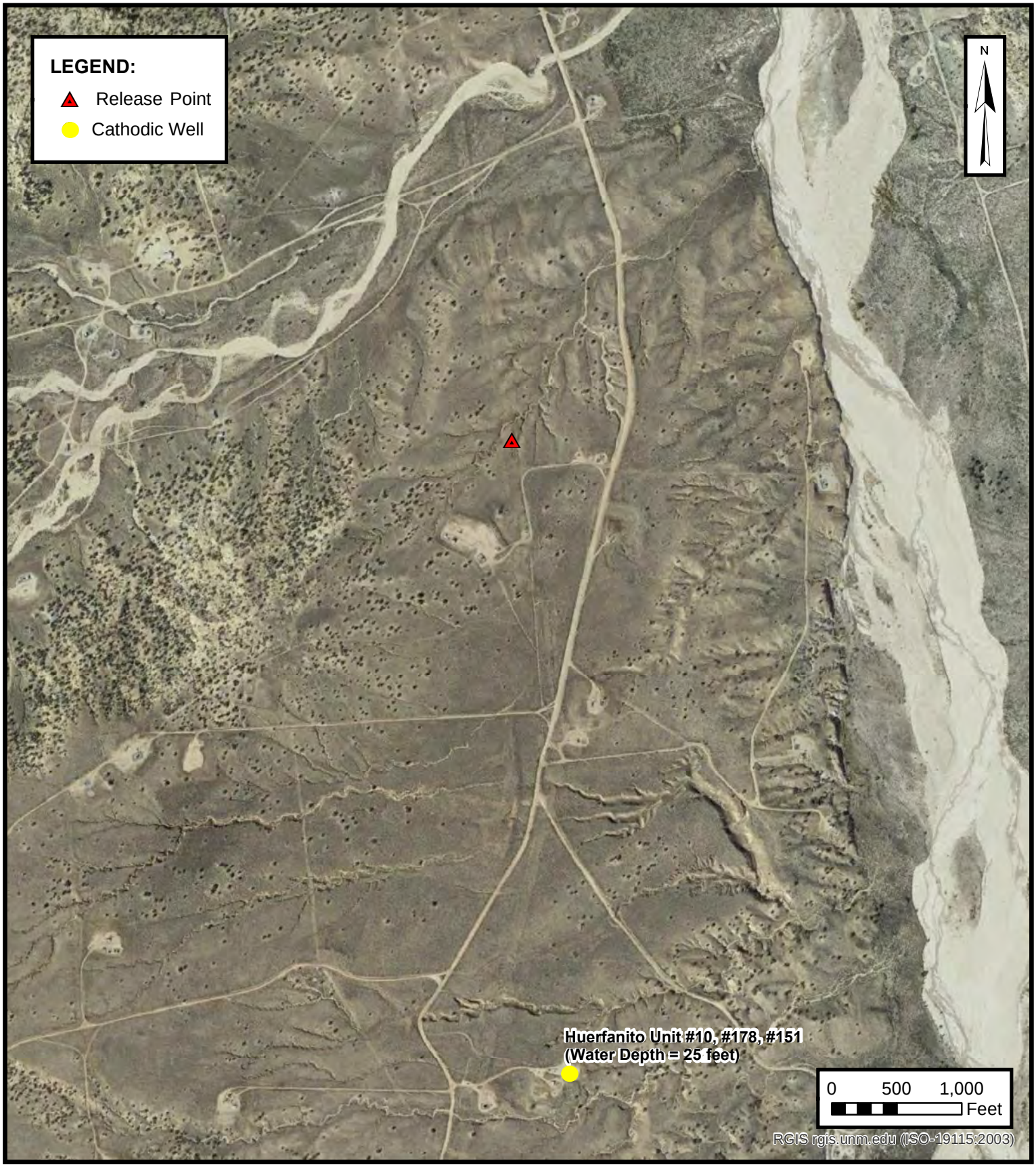
ONE MILE RADIUS WATER WELL MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W

PROJECT NUMBER: 05A1226087

FIGURE

A



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Environmental & Hydrogeologic Consultants

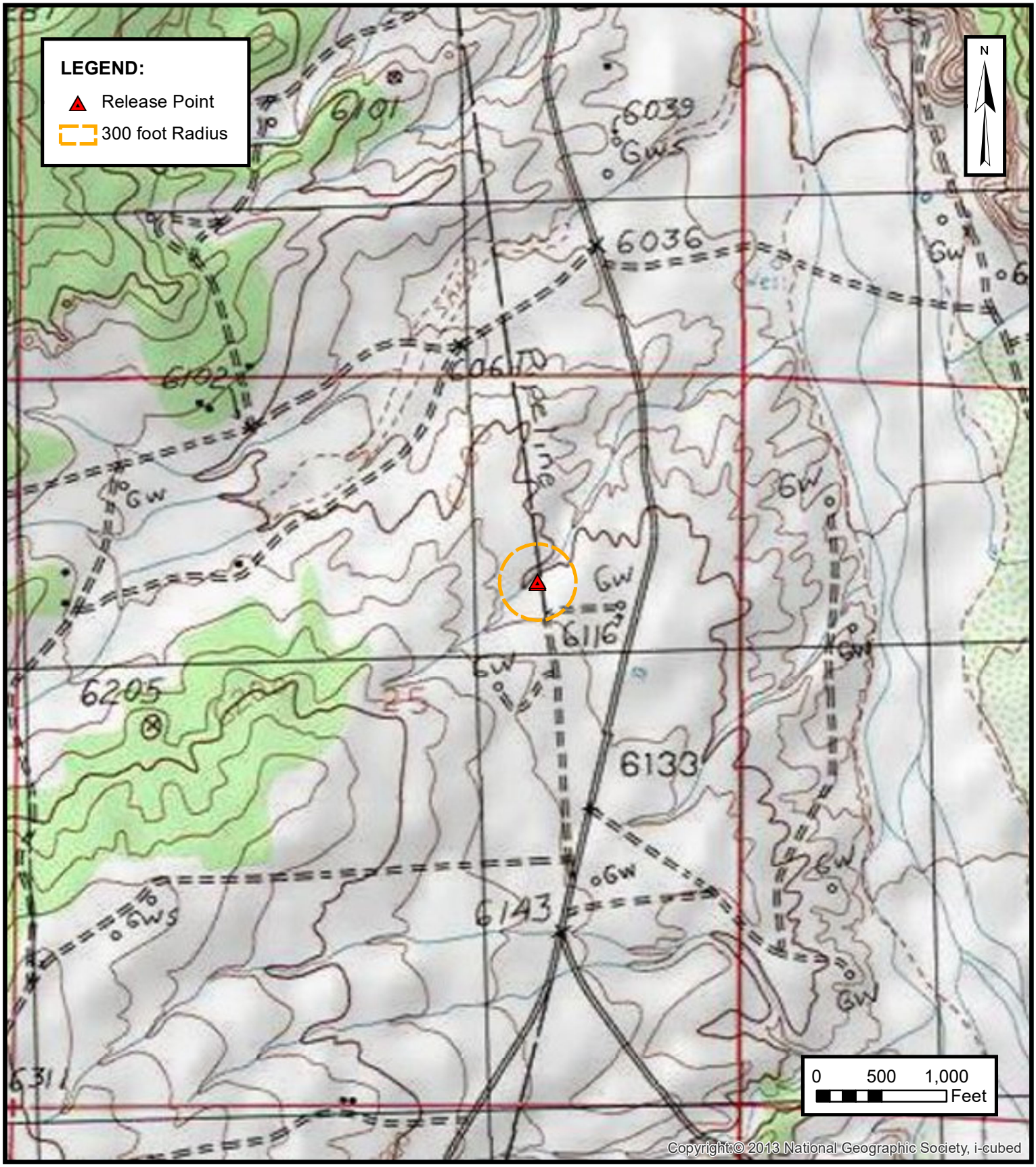
CATHODIC PROTECTION WELL RECORDED DEPTH TO WATER

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W

PROJECT NUMBER: 05A1226087

FIGURE

B



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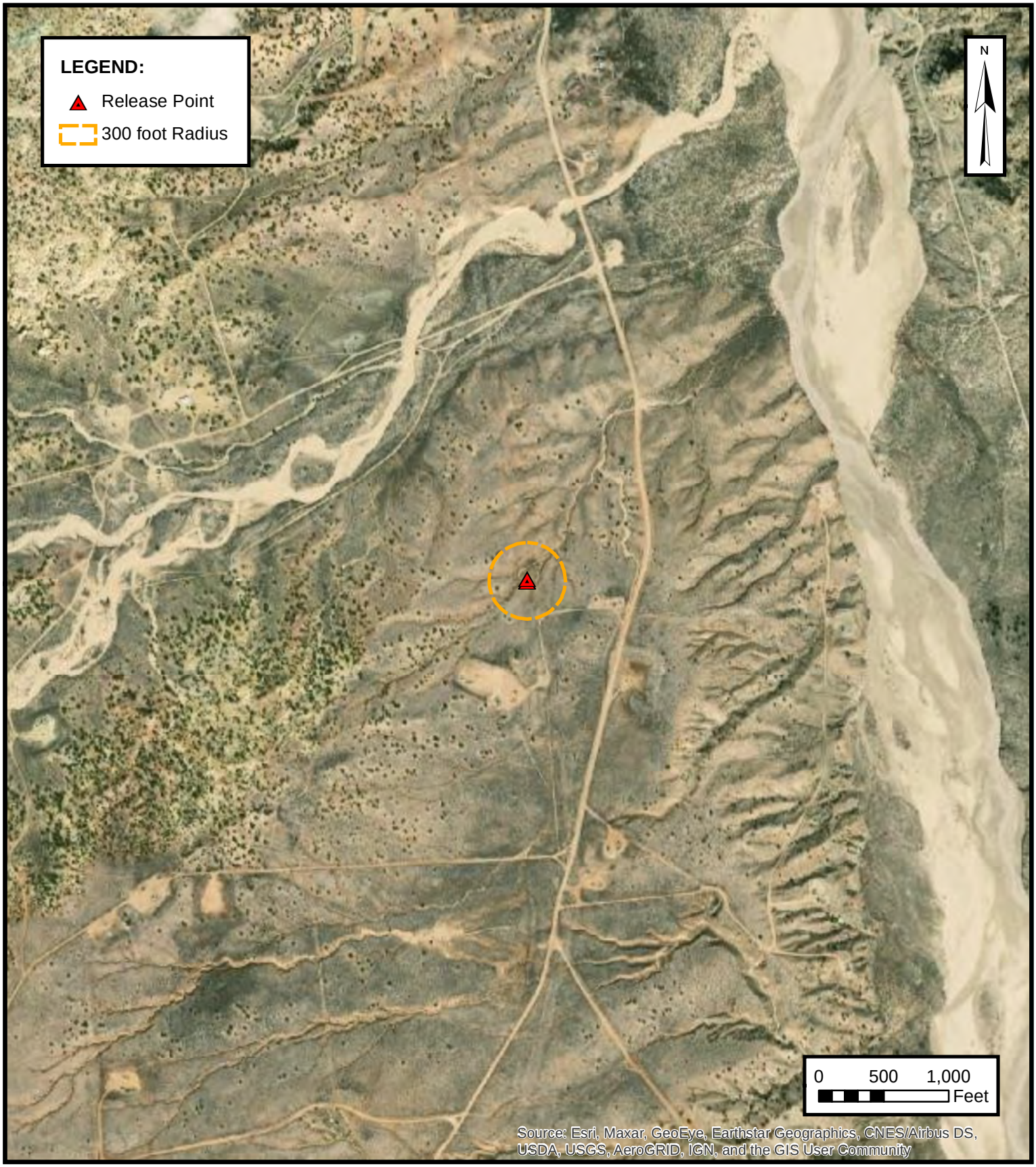
Environmental & Hydrogeologic Consultants

300-FOOT RADIUS
WATERCOURSE AND DRAINAGE IDENTIFICATION
ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W

PROJECT NUMBER: 05A1226087

FIGURE
C



ENSOLUM
Environmental & Hydrogeologic Consultants

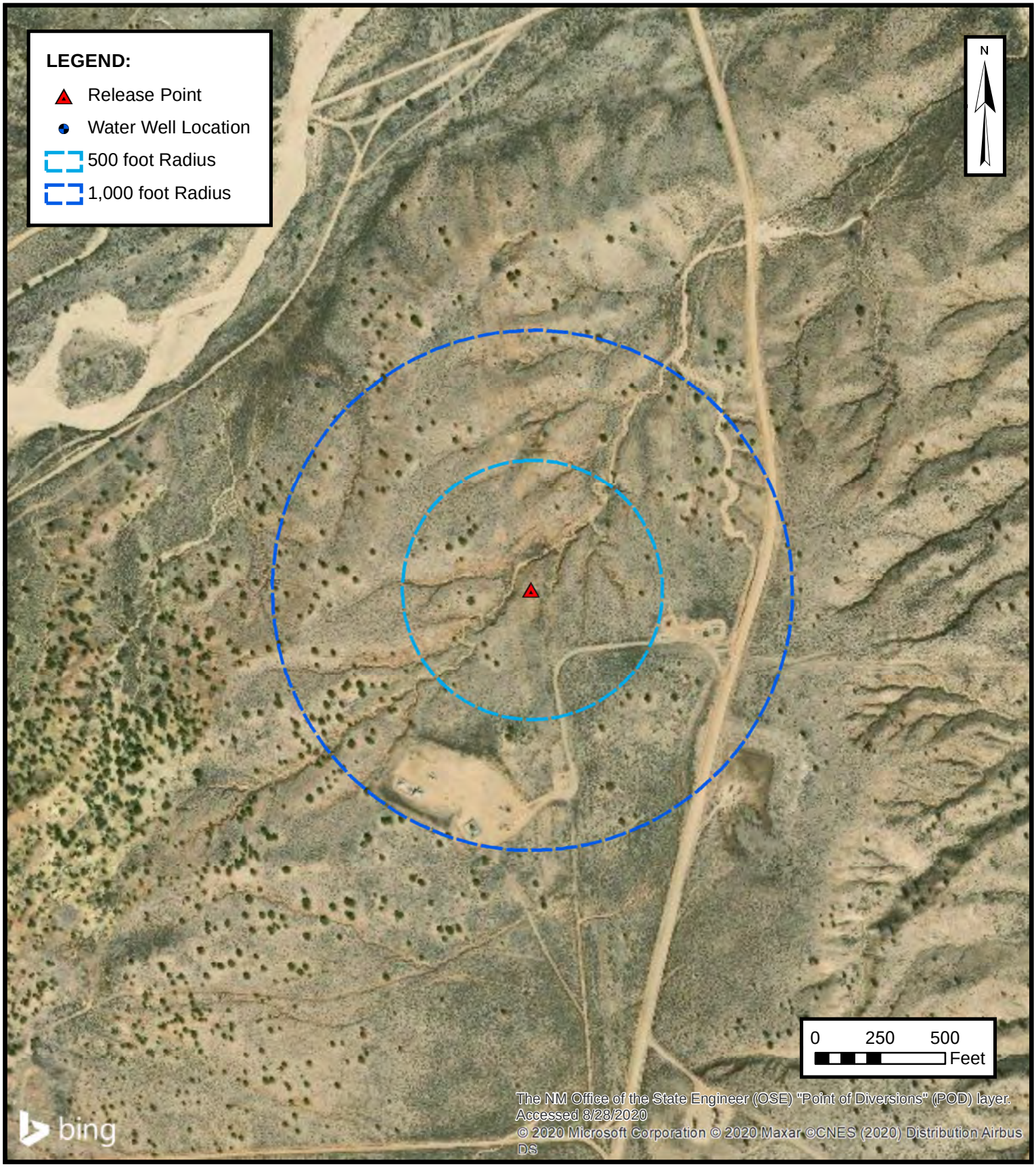
300-FOOT RADIUS
OCCUPIED STRUCTURE IDENTIFICATION

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W

PROJECT NUMBER: 05A1226087

FIGURE

D



ENSOLUM
Environmental & Hydrogeologic Consultants

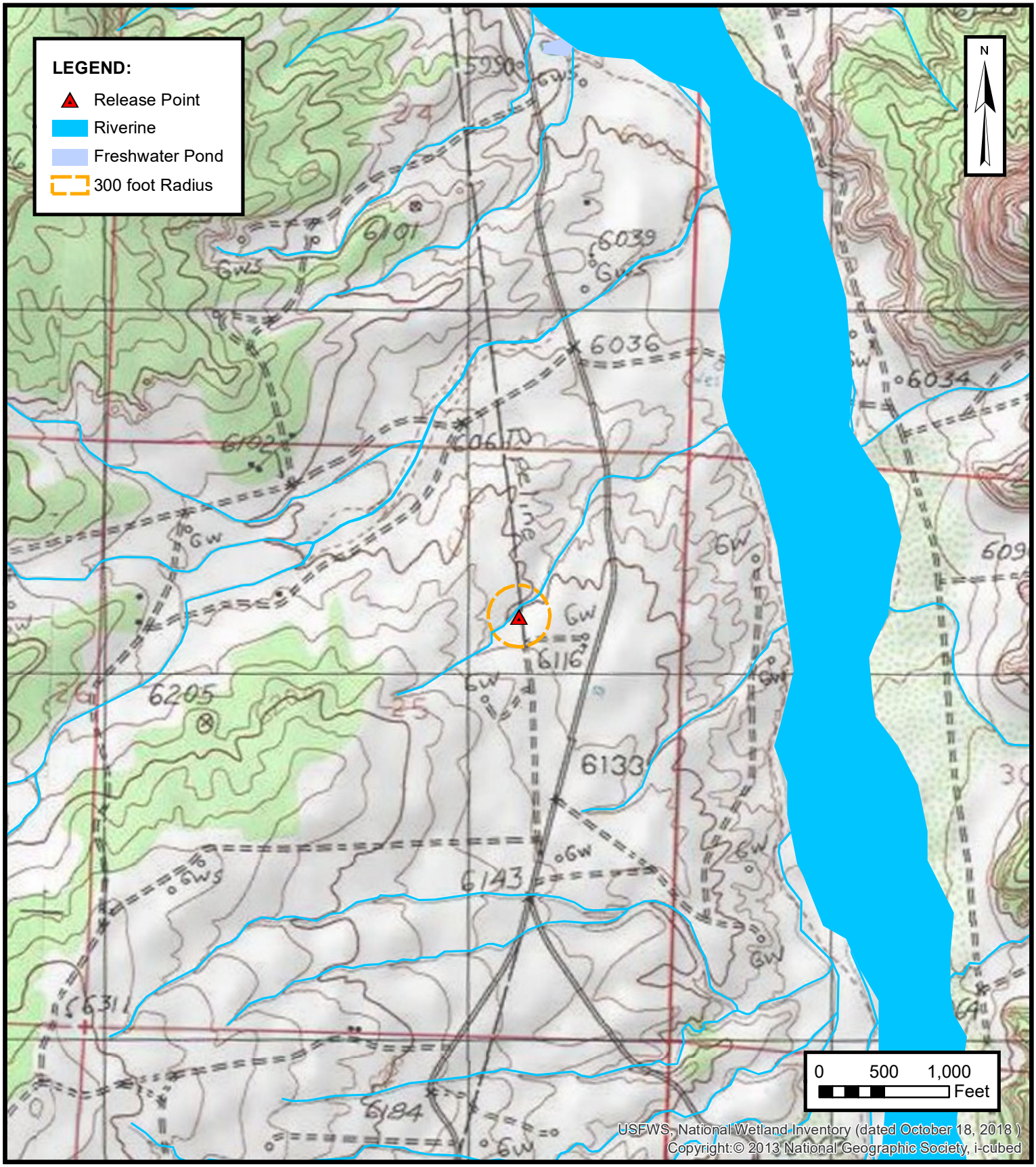
WATER WELL AND NATURAL SPRING LOCATION

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W

PROJECT NUMBER: 05A1226087

FIGURE

E



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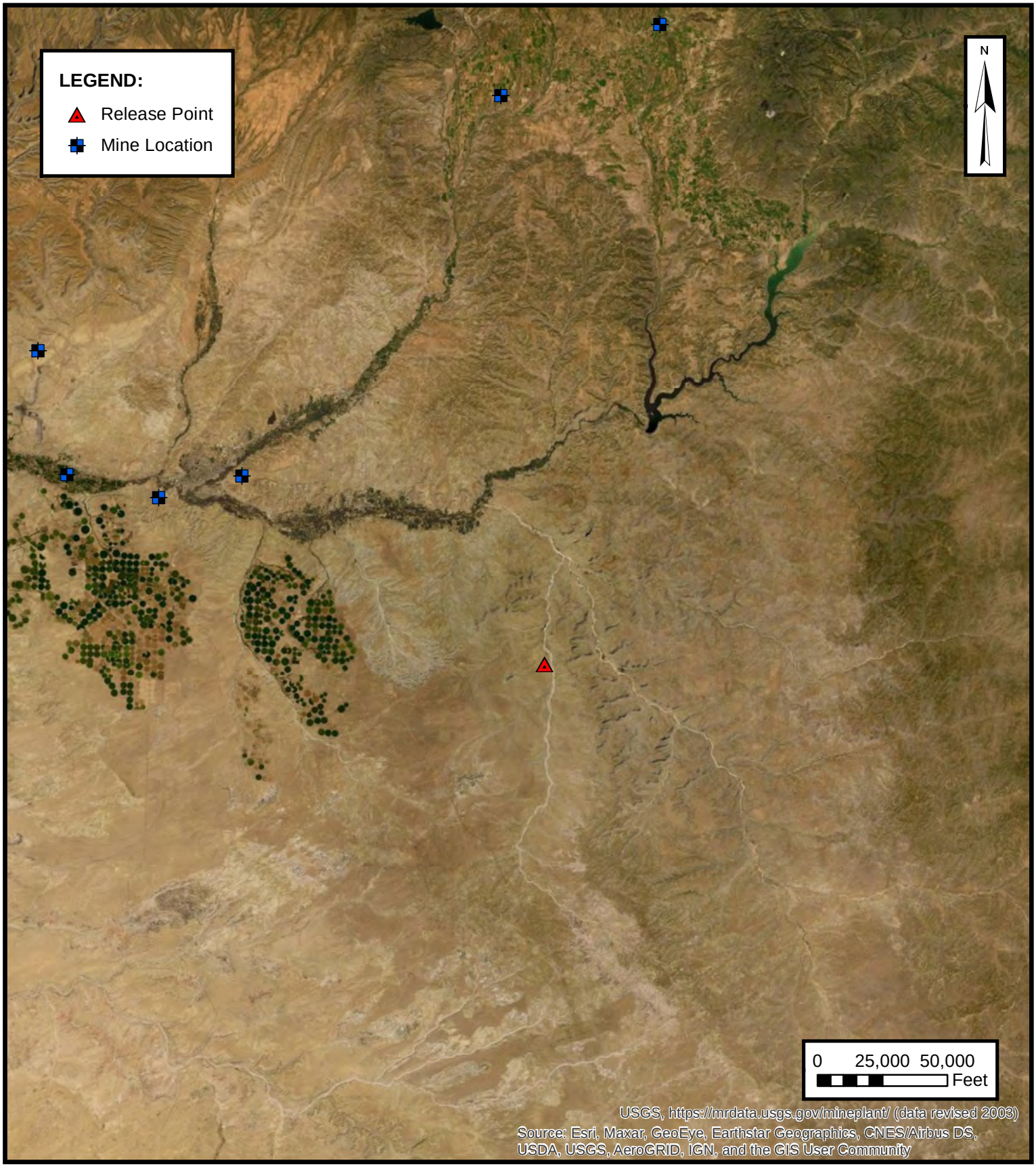
WETLANDS

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W

PROJECT NUMBER: 05A1226087

FIGURE

F



ENSOLUM
Environmental & Hydrogeologic Consultants

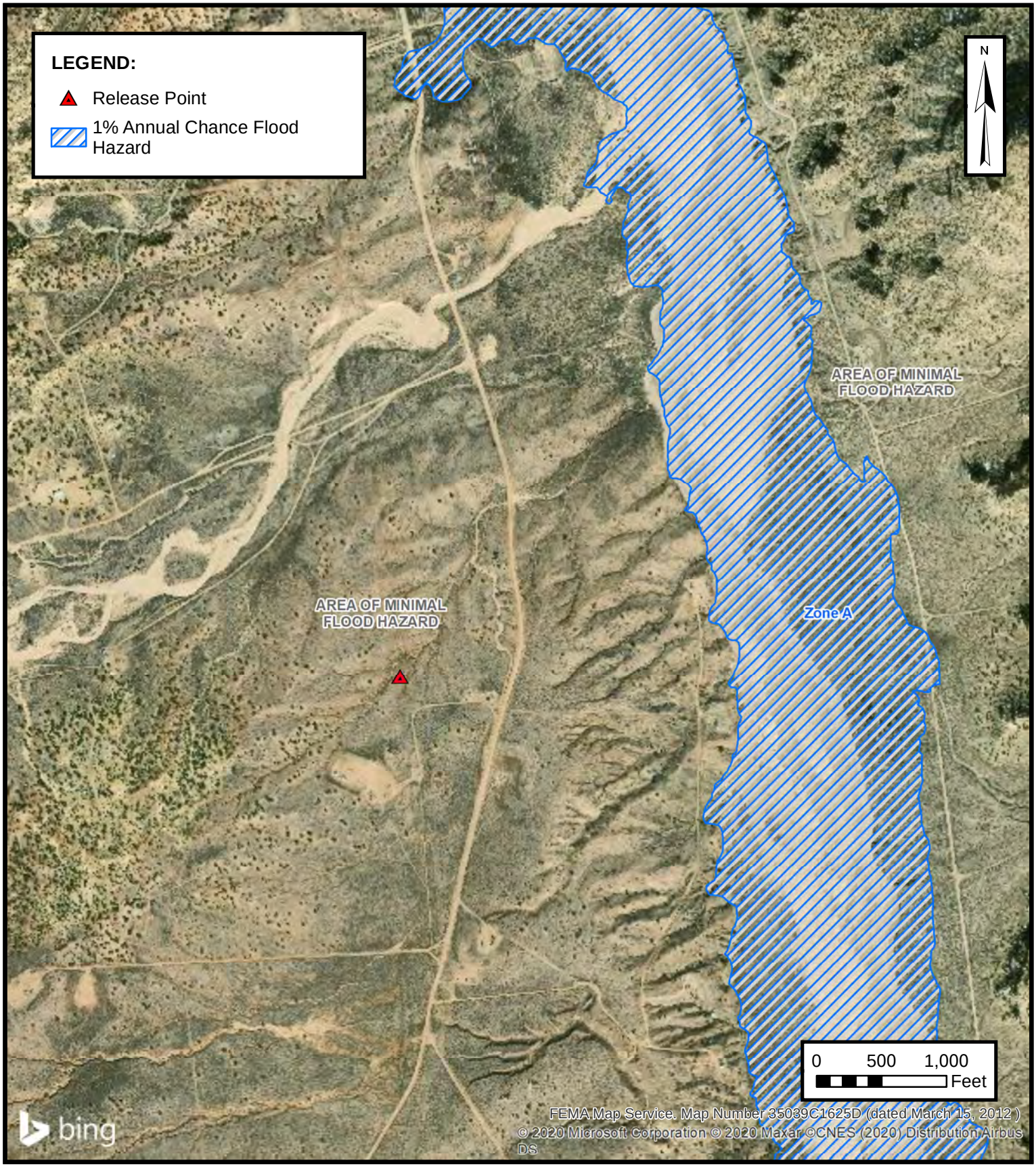
MINES, MILLS AND QUARRIES

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W

PROJECT NUMBER: 05A1226087

FIGURE

G



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100-YEAR FLOOD PLAIN MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL C-7 LOOP PIPELINE RELEASE
NE ¼, S25 T27N R9W, San Juan County, New Mexico
36.549324° N, 107.736168° W

PROJECT NUMBER: 05A1226087

FIGURE

H

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

No records found.

PLSS Search:

Section(s): 25, 24, 23, 26, 35, 36 **Township:** 27N **Range:** 09W

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.

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

No records found.

PLSS Search:

Section(s): 19, 30, 31 **Township:** 27N **Range:** 08W

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: 10/29/2020 8:14:21 AM

1416 10- 30-045-06179
178-
151- 30-045-27162

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICO
(Submit 3 copies to OCD Aztec Office)

Operator MERIDIAN OIL INC. Location: Unit A Sec. 36 Twp 27 Rng 9

Name of Well/Wells or Pipeline Serviced HUERFANITO UNIT #10, #178, #151

cps 2159w

Elevation 6138' Completion Date 6/27/89 Total Depth 300' Land Type* N/A

Casing, Sizes, Types & Depths 30'

If Casing is cemented, show amounts & types used N/A

If Cement or Bentonite Plugs have been placed, show depths & amounts used.

N/A

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 25' & 90'

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 245, 235', 225', 215', 205', 195', 185', 175', 165', 155'

Depths vent pipes placed: 300'

Vent pipe perforations: 200'

Remarks: gb #1

RECEIVED
MAY 31 1991
OIL CON. DIV.
DIST. 3

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included

*Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.
If Federal or Indian, add Lease Number.

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Received by OCD: 10/29/2020 8:14:21 AM

WELL CASING

CATHODIC PROTECTION CONSTRUCTION REPORT

DAILY LOG

COMP 7-12-89

Drilling Log (Attach Hereto) ☐

Completion Date 6-27-89

#10 #78

CBS #	Well Name, Line or Plant:	Work Order #	Static: 5. .876	Ins. Union Check
2159	Huerfanito Unit 151	3513A		☑ Good ☐ Bad

Location:	Anode Size:	Anode Type:	Size Bit:
A NE-36-27-9	2" x 60"	Duriron	6 3/4"

Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
300'	303'				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	245	235	225	215	205	195	185	175	165	155
Anode Output (Amps)	5.5	5.9	5.7	6.4	6.1	5.8	6.8	6.8	6.8	6.5
Anode Depth	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Anode Output (Amps)	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.95	Amps 27.0	Ohms .44		

Remarks: Drilled 300', logged 303', Driller said damp at 25' + 90'. Set 30' of casing (1 hr.) Installed 300' of 1" PVC vent pipe, perforated bottom 200'

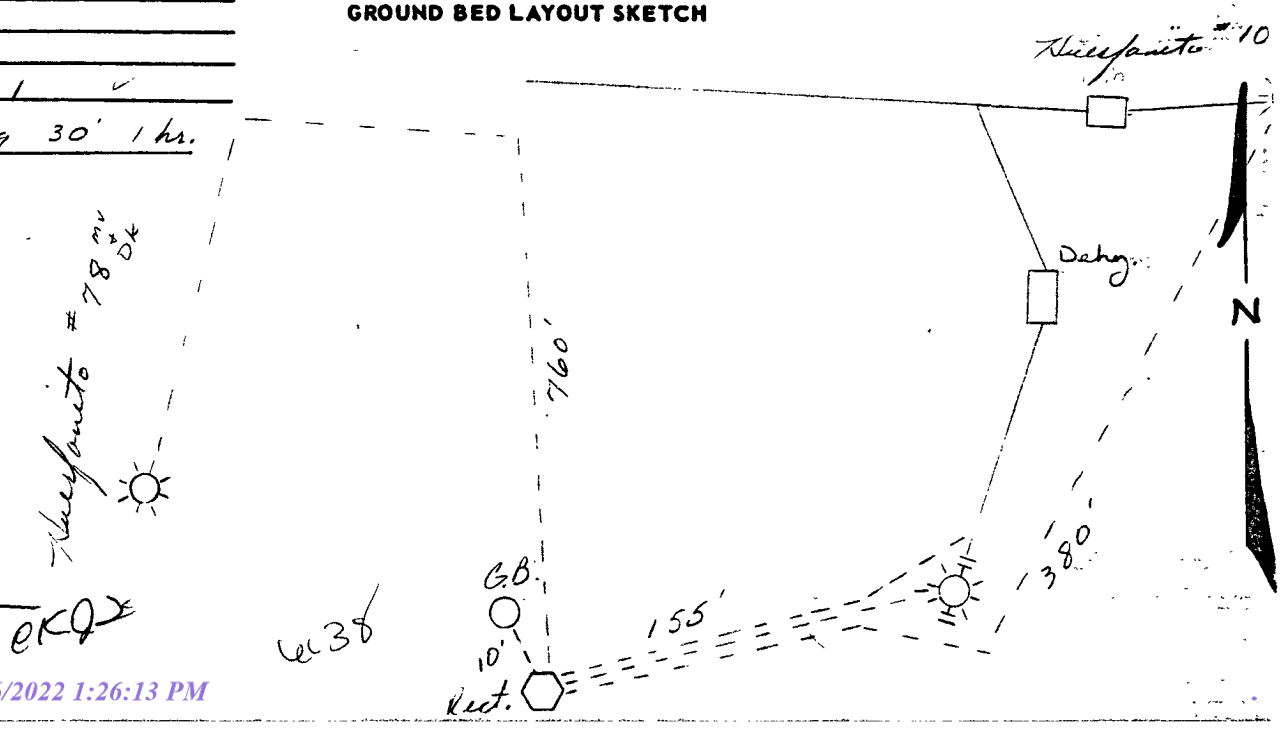
Rectifier Size: 60 V 30 A
Addn'l Depth
Depth Credit: 197' 3.75
Extra Cable: 360' .20
Ditch & 1 Cable: 1150' .10
25' Meter Pole: 1 ✓
20' Meter Pole:
10' Stub Pole:
Junction Box: 1 ✓

Surface Casing 30' 1 hr.

All Construction Completed

Tyler A. Elmstead
(Signature)

GROUND BED LAYOUT SKETCH



3,870.00 ✓
789.00 ✓
- 738.75 ✓
72.00 ✓
805.00 ✓
333.75 ✓
237.00 ✓
138.00 ✓
5506.00 ✓
275.30 ✓
5,781.30 EKQ

Released to Imaging: 5/16/2022 1:26:13 PM

D. CLASS DRILLING CO.

Drill No. 3 2159

DRILLER'S WELL LOG

S. P. No. Huerfanito #151 Date 6-27-89

Client Meridian Oil Co. Prospect

County San Juan State New Mex.

If hole is a redrill or if moved from original staked position show distance and direction moved:

FROM	TO	FORMATION — COLOR — HARDNESS
0	30	Sand ~
30	80	Shale
80	100	Sandstone ~
100	260	Shale
260	280	Sandstone
280	300	Shale

Mud Bran Lime

Rock Bit Number Make

Remarks: Water Damp @ 25' & 90'
30' CASING 1 Hr.

Driller Connie Brown

ENSOLUM

APPENDIX C

Executed C-138 Solid Waste Acceptance Form

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

97057-1062

Form C-138
Revised 08/01/11

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

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

AFE: Pending
PayKey: RB21200
PM: Maron O'Brien

2. Originating Site:
Lateral C-7 Loop

3. Location of Material (Street Address, City, State or ULSTR):
UL G Section 25 T27N R9W; 36.549324 -107.736168 Jan. 2020

4. Source and Description of Waste:
Source: Remediation activities associated with a natural gas pipeline leak.
Description: Hydrocarbon/Condensate impacted soil associated natural gas pipeline release.
Estimated Volume 50 (yd³) / bbls **Known Volume (to be entered by the operator at the end of the haul)** 96 (yd³) / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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

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

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

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

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) 1-9-2020, representative for Enterprise Products Operating authorizes Envirotech, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

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

5. Transporter: ~~Riley Industrial~~ Halo

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☒ **APPROVED** ☐ **DENIED (Must Be Maintained As Permanent Record)**

PRINT NAME: Greg Crabtree TITLE: Envir. Manager DATE: 1/17/20
SIGNATURE: _____ TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

ENSOLUM

APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Lateral C-7 Loop Pipeline Release
Ensolum Project No. 05A1226087

ENSOLUM

Photograph 1 Photograph Description: View of the initial excavation.	
Photograph 2 Photograph Description: View of in-process excavation activities.	
Photograph 3 Photograph Description: View of the final pipeline excavation.	

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SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Lateral C-7 Loop Pipeline Release
Ensolum Project No. 05A1226087

ENSOLUM

Photograph 4 Photograph Description: View of the final pipeline excavation.	

Released to Imaging: 5/16/2022 1:26:13 PM

ENSOLUM

APPENDIX E

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Lateral C-7 Loop Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (Feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (GRO/DRO/MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria				10	NE	NE	NE	50				100	600
Composite Soil Sample Removed by Excavation and Transported to the Landfarm for Disposal/Remediation													
S-16	1.17.20	C	14	<0.014	<0.029	<0.029	<0.058	ND	<2.9	<9.7	<49	ND	**670**
Stockpiled Soil Samples													
SP-1	1.15.20	C	Stockpile	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.7	<48	ND	<60
SP-2	1.15.20	C	Stockpile	<0.025	<0.050	<0.050	<0.10	ND	<5.0	<9.1	<45	ND	<61
Excavation Composite Soil Samples													
S-1	1.15.20	C	10	<0.024	<0.047	<0.047	<0.095	ND	<4.7	<8.8	<44	ND	140
S-2	1.15.20	C	10	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.6	<48	ND	140
S-3	1.15.20	C	0 to 10	<0.025	<0.050	<0.050	<0.099	ND	<5.0	<9.3	<46	ND	<60
S-4	1.15.20	C	0 to 10	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.7	<48	ND	<60
S-5	1.15.20	C	0 to 10	<0.025	<0.050	<0.050	<0.099	ND	<5.0	<9.5	<47	ND	110
S-6	1.15.20	C	0 to 10	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<10	<51	ND	230
S-7	1.15.20	C	0 to 10	<0.024	<0.049	<0.049	<0.097	ND	<4.9	<10	<50	ND	<60
S-8	1.15.20	C	0 to 9	<0.024	<0.049	<0.049	<0.097	ND	<4.9	<9.6	<48	ND	<60
S-9	1.15.20	C	0 to 7	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<9.8	<49	ND	<60
S-10	1.15.20	C	9	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<10	<50	ND	<60
S-11	1.15.20	C	0 to 5	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.5	<47	ND	<60
S-12	1.15.20	C	0 to 7	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.4	<47	ND	<60
S-13	1.15.20	C	0 to 9	<0.023	<0.047	<0.047	<0.093	ND	<4.7	<9.3	<46	ND	<60
S-14	1.15.20	C	0 to 10	<0.024	<0.047	<0.047	<0.095	ND	<4.7	12	<49	12	100
S-15	1.17.20	C	14	<0.074	<0.15	<0.15	<0.30	ND	<15	<9.5	<48	ND	590
S-17	1.17.20	C	10 to 14	<0.015	<0.030	<0.030	<0.059	ND	<3.0	<9.7	<48	ND	140
S-18	1.17.20	C	10 to 14	<0.017	<0.034	<0.034	<0.068	ND	<3.4	<9.9	<49	ND	210
S-19	1.17.20	C	10 to 14	<0.019	<0.038	<0.038	<0.076	ND	<3.8	<9.8	<49	ND	95
S-20	1.17.20	C	10 to 14	<0.017	<0.035	<0.035	<0.070	ND	<3.5	<9.3	<46	ND	150
S-21	1.23.20	C	15.5	<0.083	<0.17	<0.17	<0.33	ND	<17	<9.1	<46	ND	230

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

ENSOLUM

APPENDIX F

Laboratory Data Sheets & Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 21, 2020

Kyle Summers

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

RE: Lateral C-7 Loop Jan 2020 OrderNo.: 2001611

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 14 sample(s) on 1/16/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-1
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:00:00 PM
Lab ID: 2001611-001 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	140	60		mg/Kg	20	1/20/2020 1:16:42 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	1/17/2020 10:58:53 AM	49879
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	1/17/2020 10:58:53 AM	49879
Surr: DNOP	145	55.1-146		%Rec	1	1/17/2020 10:58:53 AM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/17/2020 10:32:02 AM	49873
Surr: BFB	81.3	66.6-105		%Rec	1	1/17/2020 10:32:02 AM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 10:32:02 AM	49873
Toluene	ND	0.047		mg/Kg	1	1/17/2020 10:32:02 AM	49873
Ethylbenzene	ND	0.047		mg/Kg	1	1/17/2020 10:32:02 AM	49873
Xylenes, Total	ND	0.095		mg/Kg	1	1/17/2020 10:32:02 AM	49873
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	1/17/2020 10:32:02 AM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-2
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:05:00 PM
Lab ID: 2001611-002 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	140	60		mg/Kg	20	1/20/2020 1:53:55 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/17/2020 11:08:02 AM	49879
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/17/2020 11:08:02 AM	49879
Surr: DNOP	104	55.1-146		%Rec	1	1/17/2020 11:08:02 AM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/17/2020 10:55:24 AM	49873
Surr: BFB	80.4	66.6-105		%Rec	1	1/17/2020 10:55:24 AM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 10:55:24 AM	49873
Toluene	ND	0.048		mg/Kg	1	1/17/2020 10:55:24 AM	49873
Ethylbenzene	ND	0.048		mg/Kg	1	1/17/2020 10:55:24 AM	49873
Xylenes, Total	ND	0.097		mg/Kg	1	1/17/2020 10:55:24 AM	49873
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	1/17/2020 10:55:24 AM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-3
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:10:00 PM
Lab ID: 2001611-003 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/20/2020 2:06:20 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/17/2020 11:17:06 AM	49879
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/17/2020 11:17:06 AM	49879
Surr: DNOP	106	55.1-146		%Rec	1	1/17/2020 11:17:06 AM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/17/2020 2:27:17 PM	49873
Surr: BFB	83.5	66.6-105		%Rec	1	1/17/2020 2:27:17 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/17/2020 2:27:17 PM	49873
Toluene	ND	0.050		mg/Kg	1	1/17/2020 2:27:17 PM	49873
Ethylbenzene	ND	0.050		mg/Kg	1	1/17/2020 2:27:17 PM	49873
Xylenes, Total	ND	0.099		mg/Kg	1	1/17/2020 2:27:17 PM	49873
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	1/17/2020 2:27:17 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-4
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:15:00 PM
Lab ID: 2001611-004 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/20/2020 2:18:44 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/17/2020 11:26:14 AM	49879
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/17/2020 11:26:14 AM	49879
Surr: DNOP	104	55.1-146		%Rec	1	1/17/2020 11:26:14 AM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/17/2020 2:50:34 PM	49873
Surr: BFB	82.4	66.6-105		%Rec	1	1/17/2020 2:50:34 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 2:50:34 PM	49873
Toluene	ND	0.048		mg/Kg	1	1/17/2020 2:50:34 PM	49873
Ethylbenzene	ND	0.048		mg/Kg	1	1/17/2020 2:50:34 PM	49873
Xylenes, Total	ND	0.097		mg/Kg	1	1/17/2020 2:50:34 PM	49873
Surr: 4-Bromofluorobenzene	93.1	80-120		%Rec	1	1/17/2020 2:50:34 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-5
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:20:00 PM
Lab ID: 2001611-005 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	110	60		mg/Kg	20	1/20/2020 2:31:09 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/17/2020 11:35:22 AM	49879
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/17/2020 11:35:22 AM	49879
Surr: DNOP	106	55.1-146		%Rec	1	1/17/2020 11:35:22 AM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/17/2020 3:14:08 PM	49873
Surr: BFB	81.5	66.6-105		%Rec	1	1/17/2020 3:14:08 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/17/2020 3:14:08 PM	49873
Toluene	ND	0.050		mg/Kg	1	1/17/2020 3:14:08 PM	49873
Ethylbenzene	ND	0.050		mg/Kg	1	1/17/2020 3:14:08 PM	49873
Xylenes, Total	ND	0.099		mg/Kg	1	1/17/2020 3:14:08 PM	49873
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	1/17/2020 3:14:08 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-6
Project: Lateral C-7 Loop Jan 2020
Collection Date: 1/15/2020 1:25:00 PM
Lab ID: 2001611-006 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	230	60		mg/Kg	20	1/20/2020 2:43:33 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/17/2020 1:45:38 PM	49879
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	1/17/2020 1:45:38 PM	49879
Surr: DNOP	105	55.1-146		%Rec	1	1/17/2020 1:45:38 PM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/17/2020 3:37:35 PM	49873
Surr: BFB	82.8	66.6-105		%Rec	1	1/17/2020 3:37:35 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 3:37:35 PM	49873
Toluene	ND	0.048		mg/Kg	1	1/17/2020 3:37:35 PM	49873
Ethylbenzene	ND	0.048		mg/Kg	1	1/17/2020 3:37:35 PM	49873
Xylenes, Total	ND	0.097		mg/Kg	1	1/17/2020 3:37:35 PM	49873
Surr: 4-Bromofluorobenzene	93.1	80-120		%Rec	1	1/17/2020 3:37:35 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-7
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:30:00 PM
Lab ID: 2001611-007 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/20/2020 3:20:46 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/17/2020 11:53:38 AM	49879
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/17/2020 11:53:38 AM	49879
Surr: DNOP	107	55.1-146		%Rec	1	1/17/2020 11:53:38 AM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/17/2020 4:24:31 PM	49873
Surr: BFB	84.2	66.6-105		%Rec	1	1/17/2020 4:24:31 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 4:24:31 PM	49873
Toluene	ND	0.049		mg/Kg	1	1/17/2020 4:24:31 PM	49873
Ethylbenzene	ND	0.049		mg/Kg	1	1/17/2020 4:24:31 PM	49873
Xylenes, Total	ND	0.097		mg/Kg	1	1/17/2020 4:24:31 PM	49873
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	1/17/2020 4:24:31 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-8
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:35:00 PM
Lab ID: 2001611-008 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/20/2020 3:33:11 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/17/2020 12:02:52 PM	49879
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/17/2020 12:02:52 PM	49879
Surr: DNOP	86.8	55.1-146		%Rec	1	1/17/2020 12:02:52 PM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/17/2020 4:48:04 PM	49873
Surr: BFB	80.6	66.6-105		%Rec	1	1/17/2020 4:48:04 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 4:48:04 PM	49873
Toluene	ND	0.049		mg/Kg	1	1/17/2020 4:48:04 PM	49873
Ethylbenzene	ND	0.049		mg/Kg	1	1/17/2020 4:48:04 PM	49873
Xylenes, Total	ND	0.097		mg/Kg	1	1/17/2020 4:48:04 PM	49873
Surr: 4-Bromofluorobenzene	92.1	80-120		%Rec	1	1/17/2020 4:48:04 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-9
Project: Lateral C-7 Loop Jan 2020
Collection Date: 1/15/2020 1:40:00 PM
Lab ID: 2001611-009 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/20/2020 3:45:36 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/17/2020 12:12:07 PM	49879
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/17/2020 12:12:07 PM	49879
Surr: DNOP	87.5	55.1-146		%Rec	1	1/17/2020 12:12:07 PM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/17/2020 7:31:58 PM	49873
Surr: BFB	81.0	66.6-105		%Rec	1	1/17/2020 7:31:58 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/17/2020 7:31:58 PM	49873
Toluene	ND	0.049		mg/Kg	1	1/17/2020 7:31:58 PM	49873
Ethylbenzene	ND	0.049		mg/Kg	1	1/17/2020 7:31:58 PM	49873
Xylenes, Total	ND	0.098		mg/Kg	1	1/17/2020 7:31:58 PM	49873
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	1/17/2020 7:31:58 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-10
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:45:00 PM
Lab ID: 2001611-010 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/20/2020 3:58:00 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/17/2020 12:21:22 PM	49879
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/17/2020 12:21:22 PM	49879
Surr: DNOP	85.7	55.1-146		%Rec	1	1/17/2020 12:21:22 PM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/17/2020 7:55:16 PM	49873
Surr: BFB	82.8	66.6-105		%Rec	1	1/17/2020 7:55:16 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 7:55:16 PM	49873
Toluene	ND	0.048		mg/Kg	1	1/17/2020 7:55:16 PM	49873
Ethylbenzene	ND	0.048		mg/Kg	1	1/17/2020 7:55:16 PM	49873
Xylenes, Total	ND	0.097		mg/Kg	1	1/17/2020 7:55:16 PM	49873
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	1/17/2020 7:55:16 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-11
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:50:00 PM
Lab ID: 2001611-011 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/20/2020 4:10:25 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/17/2020 12:30:35 PM	49879
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/17/2020 12:30:35 PM	49879
Surr: DNOP	89.0	55.1-146		%Rec	1	1/17/2020 12:30:35 PM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/17/2020 8:18:37 PM	49873
Surr: BFB	81.6	66.6-105		%Rec	1	1/17/2020 8:18:37 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 8:18:37 PM	49873
Toluene	ND	0.048		mg/Kg	1	1/17/2020 8:18:37 PM	49873
Ethylbenzene	ND	0.048		mg/Kg	1	1/17/2020 8:18:37 PM	49873
Xylenes, Total	ND	0.097		mg/Kg	1	1/17/2020 8:18:37 PM	49873
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	1/17/2020 8:18:37 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-12
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 1:55:00 PM
Lab ID: 2001611-012 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/20/2020 4:22:50 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/17/2020 12:39:51 PM	49879
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/17/2020 12:39:51 PM	49879
Surr: DNOP	85.7	55.1-146		%Rec	1	1/17/2020 12:39:51 PM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/17/2020 8:41:54 PM	49873
Surr: BFB	79.5	66.6-105		%Rec	1	1/17/2020 8:41:54 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 8:41:54 PM	49873
Toluene	ND	0.048		mg/Kg	1	1/17/2020 8:41:54 PM	49873
Ethylbenzene	ND	0.048		mg/Kg	1	1/17/2020 8:41:54 PM	49873
Xylenes, Total	ND	0.096		mg/Kg	1	1/17/2020 8:41:54 PM	49873
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	1/17/2020 8:41:54 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-13
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 2:00:00 PM
Lab ID: 2001611-013 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/20/2020 5:38:59 PM	49925
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/17/2020 12:49:03 PM	49879
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/17/2020 12:49:03 PM	49879
Surr: DNOP	85.8	55.1-146		%Rec	1	1/17/2020 12:49:03 PM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/17/2020 9:05:10 PM	49873
Surr: BFB	79.3	66.6-105		%Rec	1	1/17/2020 9:05:10 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	1/17/2020 9:05:10 PM	49873
Toluene	ND	0.047		mg/Kg	1	1/17/2020 9:05:10 PM	49873
Ethylbenzene	ND	0.047		mg/Kg	1	1/17/2020 9:05:10 PM	49873
Xylenes, Total	ND	0.093		mg/Kg	1	1/17/2020 9:05:10 PM	49873
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	1/17/2020 9:05:10 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001611**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-14
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 2:05:00 PM
Lab ID: 2001611-014 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	100	60		mg/Kg	20	1/20/2020 5:51:20 PM	49925
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	12	9.9		mg/Kg	1	1/17/2020 12:58:17 PM	49879
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/17/2020 12:58:17 PM	49879
Surr: DNOP	90.8	55.1-146		%Rec	1	1/17/2020 12:58:17 PM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/17/2020 9:28:26 PM	49873
Surr: BFB	97.1	66.6-105		%Rec	1	1/17/2020 9:28:26 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 9:28:26 PM	49873
Toluene	ND	0.047		mg/Kg	1	1/17/2020 9:28:26 PM	49873
Ethylbenzene	ND	0.047		mg/Kg	1	1/17/2020 9:28:26 PM	49873
Xylenes, Total	ND	0.095		mg/Kg	1	1/17/2020 9:28:26 PM	49873
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	1/17/2020 9:28:26 PM	49873

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001611**

21-Jan-20

Client: ENSOLUM

Project: Lateral C-7 Loop Jan 2020

Sample ID: **MB-49911** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **49911** RunNo: **65902**

Prep Date: **1/20/2020** Analysis Date: **1/20/2020** SeqNo: **2264169** Units: **mg/Kg**

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

Sample ID: **LCS-49911** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **49911** RunNo: **65902**

Prep Date: **1/20/2020** Analysis Date: **1/20/2020** SeqNo: **2264170** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Sample ID: **MB-49925** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **49925** RunNo: **65933**

Prep Date: **1/20/2020** Analysis Date: **1/20/2020** SeqNo: **2264389** Units: **mg/Kg**

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

Sample ID: **LCS-49925** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **49925** RunNo: **65933**

Prep Date: **1/20/2020** Analysis Date: **1/20/2020** SeqNo: **2264390** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001611**
21-Jan-20

Client: ENSOLUM
Project: Lateral C-7 Loop Jan 2020

Sample ID: **LCS-49879** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49879** RunNo: **65877**
Prep Date: **1/17/2020** Analysis Date: **1/17/2020** SeqNo: **2262125** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	63.9	124			
Surr: DNOP	4.1		5.000		81.9	55.1	146			

Sample ID: **MB-49879** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49879** RunNo: **65877**
Prep Date: **1/17/2020** Analysis Date: **1/17/2020** SeqNo: **2262126** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		100	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001611**
21-Jan-20

Client: ENSOLUM
Project: Lateral C-7 Loop Jan 2020

Sample ID: **mb-49873** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **49873** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262859** 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	860		1000		86.4	66.6	105			

Sample ID: **lcs-49873** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **49873** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262860** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.7	80	120			
Surr: BFB	990		1000		99.0	66.6	105			

Sample ID: **mb-49874** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **49874** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262883** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	830		1000		83.1	66.6	105			

Sample ID: **lcs-49874** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **49874** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262884** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	870		1000		87.0	66.6	105			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001611**

21-Jan-20

Client: ENSOLUM

Project: Lateral C-7 Loop Jan 2020

Sample ID: **mb-49873** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **49873** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262911** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.0	80	120			

Sample ID: **mb-49874** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **49874** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262935** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	80	120			

Sample ID: **LCS-49873** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **49873** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262948** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.7	80	120			
Toluene	0.96	0.050	1.000	0	96.2	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.2	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.2	80	120			

Sample ID: **LCS-49874** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **49874** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262949** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		1.000		89.3	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM AZTEC** Work Order Number: **2001611** RcptNo: **1**

Received By: **Desiree Dominguez** **1/16/2020 7:50:00 AM** DD

Completed By: **Isaiah Ortiz** **1/16/2020 8:32:53 AM** I-Ox

Reviewed By: YG 1/16/20

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

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

Adjusted? _____

Checked by: JR 1/16/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes			

Released to Imaging: 5/16/2022 1:26:13 PM
Received by OCD: 10/29/2020 8:14:21 AM

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: KSummers@ensolum.com

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

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

Turn-Around Time: 3-DAY
☐ Standard ☒ Rush

Project Name: Lateral C-7 LOOP (Jan 2020)

Project #: See notes

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 3.0 - 0.0 = 3.0°c

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2001611	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
1/15/20	1300	S	S-1	1x4oz Jar	cool	-001	X	X									X
1/15/20	1305	S	S-2	1x4oz Jar	cool	-002	X	X									X
1/15/20	1310	S	S-3	1x4oz Jar	cool	-003	X	X									X
1/15/20	1315	S	S-4	1x4oz Jar	cool	-004	X	X									X
1/15/20	1320	S	S-5	1x4oz Jar	cool	-005	X	X									X
1/15/20	1325	S	S-6	1x4oz Jar	cool	-006	X	X									X
1/15/20	1330	S	S-7	1x4oz Jar	cool	-007	X	X									X
1/15/20	1335	S	S-8	1x4oz Jar	cool	-008	X	X									X
1/15/20	1340	S	S-9	1x4oz Jar	cool	-009	X	X									X
1/15/20	1345	S	S-10	1x4oz Jar	cool	-010	X	X									X
1/15/20	1350	S	S-11	1x4oz Jar	cool	-011	X	X									X
1/15/20	1355	S	S-12	1x4oz Jar	cool	-012	X	X									X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/15/20	1702				1/15/20	1702
1/15/20	1817			Courier	1/16/20	7:50

Remarks:
3-DAY Turnaround
PM - Tom Long (EPROD)
Pay Key - RB21200
NonAFE - N45551

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

Released to Imaging: 5/16/2022 1:26:13 PM
Received by OCD: 10/29/2020 8:14:21 AM

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 3-DAY
☐ Standard ☒ Rush

Project Name: Lateral C-7 Loop (Jan 2020)

Project #: see notes

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 3.0-0.0= 3.0°c

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2001611	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
1/15/20	1400	S	S-13	1x4oz Jar	cool	-013	X	X									X
1/15/20	1405	S	S-14	1x4oz Jar	cool	-014	X	X									X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/15/20	1702			Walk	1/15/20	1702
1/15/20	1817			Courier	1/16/20	7:50

Remarks:
3-DAY Turnaround
PM - Tom Long (EPROD)
Pay Key - RB21200
Non AFE - N4555 1

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 21, 2020

Kyle Summers

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

RE: Lateral C-7 Loop Jan 2020 OrderNo.: 2001608

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/16/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2001608**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: SP-1
Project: Lateral C-7 Loop Jan 2020
Collection Date: 1/15/2020 2:10:00 PM
Lab ID: 2001608-001 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	1/18/2020 5:32:40 AM	49898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/17/2020 10:22:26 AM	49879
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/17/2020 10:22:26 AM	49879
Surr: DNOP	117	55.1-146		%Rec	1	1/17/2020 10:22:26 AM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/17/2020 12:06:27 PM	49873
Surr: BFB	81.3	66.6-105		%Rec	1	1/17/2020 12:06:27 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/17/2020 12:06:27 PM	49873
Toluene	ND	0.048		mg/Kg	1	1/17/2020 12:06:27 PM	49873
Ethylbenzene	ND	0.048		mg/Kg	1	1/17/2020 12:06:27 PM	49873
Xylenes, Total	ND	0.096		mg/Kg	1	1/17/2020 12:06:27 PM	49873
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	1/17/2020 12:06:27 PM	49873

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

Qualifiers:

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

Analytical Report
Lab Order **2001608**
Date Reported: **1/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-2
Project: Lateral C-7 Loop Jan 2020 **Collection Date:** 1/15/2020 2:15:00 PM
Lab ID: 2001608-002 **Matrix:** SOIL **Received Date:** 1/16/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	61		mg/Kg	20	1/20/2020 5:00:04 PM	49898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	1/17/2020 10:49:45 AM	49879
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/17/2020 10:49:45 AM	49879
Surr: DNOP	105	55.1-146		%Rec	1	1/17/2020 10:49:45 AM	49879
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/17/2020 1:16:46 PM	49873
Surr: BFB	81.7	66.6-105		%Rec	1	1/17/2020 1:16:46 PM	49873
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/17/2020 1:16:46 PM	49873
Toluene	ND	0.050		mg/Kg	1	1/17/2020 1:16:46 PM	49873
Ethylbenzene	ND	0.050		mg/Kg	1	1/17/2020 1:16:46 PM	49873
Xylenes, Total	ND	0.10		mg/Kg	1	1/17/2020 1:16:46 PM	49873
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	1/17/2020 1:16:46 PM	49873

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001608**

21-Jan-20

Client: ENSOLUM

Project: Lateral C-7 Loop Jan 2020

Sample ID: **MB-49898** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **49898** RunNo: **65885**
Prep Date: **1/17/2020** Analysis Date: **1/17/2020** SeqNo: **2262633** Units: **mg/Kg**

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

Sample ID: **LCS-49898** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **49898** RunNo: **65885**
Prep Date: **1/17/2020** Analysis Date: **1/17/2020** SeqNo: **2262634** Units: **mg/Kg**

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

Sample ID: **MB-49898** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **49898** RunNo: **65902**
Prep Date: **1/17/2020** Analysis Date: **1/20/2020** SeqNo: **2264199** Units: **mg/Kg**

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

Sample ID: **LCS-49898** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **49898** RunNo: **65902**
Prep Date: **1/17/2020** Analysis Date: **1/20/2020** SeqNo: **2264200** Units: **mg/Kg**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001608**

21-Jan-20

Client: ENSOLUM

Project: Lateral C-7 Loop Jan 2020

Sample ID: **2001608-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **SP-1** Batch ID: **49879** RunNo: **65877**

Prep Date: **1/17/2020** Analysis Date: **1/17/2020** SeqNo: **2262113** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.9	49.36	2.471	96.5	47.4	136			
Surr: DNOP	4.4		4.936		89.1	55.1	146			

Sample ID: **2001608-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **SP-1** Batch ID: **49879** RunNo: **65877**

Prep Date: **1/17/2020** Analysis Date: **1/17/2020** SeqNo: **2262114** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.5	47.30	2.471	95.7	47.4	136	4.85	43.4	
Surr: DNOP	4.1		4.730		87.7	55.1	146	0	0	

Sample ID: **LCS-49879** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **49879** RunNo: **65877**

Prep Date: **1/17/2020** Analysis Date: **1/17/2020** SeqNo: **2262125** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	63.9	124			
Surr: DNOP	4.1		5.000		81.9	55.1	146			

Sample ID: **MB-49879** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **49879** RunNo: **65877**

Prep Date: **1/17/2020** Analysis Date: **1/17/2020** SeqNo: **2262126** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		100	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001608**
21-Jan-20

Client: ENSOLUM
Project: Lateral C-7 Loop Jan 2020

Sample ID: **mb-49873** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **49873** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262859** 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	860		1000		86.4	66.6	105			

Sample ID: **lcs-49873** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **49873** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262860** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.7	80	120			
Surr: BFB	990		1000		99.0	66.6	105			

Sample ID: **2001608-001ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SP-1** Batch ID: **49873** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262862** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	24.78	0	101	69.1	142			
Surr: BFB	920		991.1		92.5	66.6	105			

Sample ID: **2001608-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SP-1** Batch ID: **49873** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262863** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	23.97	0	104	69.1	142	0.813	20	
Surr: BFB	880		958.8		91.7	66.6	105	0	0	

Sample ID: **mb-49874** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **49874** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262883** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	830		1000		83.1	66.6	105			

Sample ID: **lcs-49874** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **49874** RunNo: **65896**
Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262884** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	870		1000		87.0	66.6	105			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001608**

21-Jan-20

Client: ENSOLUM

Project: Lateral C-7 Loop Jan 2020

Sample ID: **mb-49873** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **49873** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262911** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.0	80	120			

Sample ID: **2001608-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **SP-2** Batch ID: **49873** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262915** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.024	0.9606	0	102	78.5	119			
Toluene	1.0	0.048	0.9606	0.01228	102	75.7	123			
Ethylbenzene	1.0	0.048	0.9606	0	104	74.3	126			
Xylenes, Total	3.0	0.096	2.882	0.01926	104	72.9	130			
Surr: 4-Bromofluorobenzene	0.91		0.9606		94.9	80	120			

Sample ID: **2001608-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **SP-2** Batch ID: **49873** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262916** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.023	0.9225	0	106	78.5	119	0.388	20	
Toluene	1.0	0.046	0.9225	0.01228	107	75.7	123	0.00513	20	
Ethylbenzene	1.0	0.046	0.9225	0	108	74.3	126	0.219	20	
Xylenes, Total	3.0	0.092	2.768	0.01926	108	72.9	130	0.243	20	
Surr: 4-Bromofluorobenzene	0.88		0.9225		95.2	80	120	0	0	

Sample ID: **mb-49874** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **49874** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262935** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	80	120			

Sample ID: **LCS-49873** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **49873** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262948** 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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001608**

21-Jan-20

Client: ENSOLUM

Project: Lateral C-7 Loop Jan 2020

Sample ID: **LCS-49873** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **49873** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262948** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.7	80	120			
Toluene	0.96	0.050	1.000	0	96.2	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.2	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.2	80	120			

Sample ID: **LCS-49874** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **49874** RunNo: **65896**

Prep Date: **1/16/2020** Analysis Date: **1/17/2020** SeqNo: **2262949** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		1.000		89.3	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM AZTEC** Work Order Number: **2001608** RcptNo: **1**

Received By: **Desiree Dominguez** **1/16/2020 7:50:00 AM** DD

Completed By: **Isaiah Ortiz** **1/16/2020 8:22:09 AM** I-O

Reviewed By: DM 1/16/20

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

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

Adjusted? _____

Checked by: YG 1/16/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes			

Released to Imaging: 5/16/2022 1:26:13 PM

Received by OCD: 10/29/2020 8:14:21 AM

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 3-DAY

Project Name: Lateral C-7 Loop (Jan 2020)

Project #: see notes

Project Manager: KSummers

Sampler: RDeechilly

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.0 - 0.0 = 3.0°c

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2001608	BTEX / ~~MTBE / TMB's~~ (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
11/15/20	1410	S	SP-1	1x4oz Jar	cool	-001	X	X									X
11/15/20	1415	S	SP-2	1x4oz Jar	cool	-002	X	X									X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/15/20	1702	RDeechilly	Chantz Walk		11/15/20	1702
11/15/20	1817	Chantz Walk		courier	11/16/20	7:50

Remarks: 3-DAY Turnaround
PM - Tom Long (EPROD)
Pax Key - RB21200
Non AFE - N45551

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 22, 2020

Kyle Summers

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

RE: Lateral C 7 Loop Jan 2020 OrderNo.: 2001729

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 1/18/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2001729**
Date Reported: **1/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-15
Project: Lateral C 7 Loop Jan 2020 **Collection Date:** 1/17/2020 10:10:00 AM
Lab ID: 2001729-001 **Matrix:** MEOH (SOIL) **Received Date:** 1/18/2020 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	590	60		mg/Kg	20	1/20/2020 11:12:37 AM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/20/2020 10:29:02 AM	49907
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/20/2020 10:29:02 AM	49907
Surr: DNOP	83.3	55.1-146		%Rec	1	1/20/2020 10:29:02 AM	49907
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	15		mg/Kg	5	1/20/2020 11:38:59 AM	G65910
Surr: BFB	85.2	66.6-105		%Rec	5	1/20/2020 11:38:59 AM	G65910
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.074		mg/Kg	5	1/20/2020 11:38:59 AM	B65910
Toluene	ND	0.15		mg/Kg	5	1/20/2020 11:38:59 AM	B65910
Ethylbenzene	ND	0.15		mg/Kg	5	1/20/2020 11:38:59 AM	B65910
Xylenes, Total	ND	0.30		mg/Kg	5	1/20/2020 11:38:59 AM	B65910
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	5	1/20/2020 11:38:59 AM	B65910

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

Qualifiers:

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

Analytical Report
Lab Order **2001729**
Date Reported: **1/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-16
Project: Lateral C 7 Loop Jan 2020 **Collection Date:** 1/17/2020 10:15:00 AM
Lab ID: 2001729-002 **Matrix:** MEOH (SOIL) **Received Date:** 1/18/2020 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	670	60		mg/Kg	20	1/20/2020 11:25:01 AM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/20/2020 10:38:04 AM	49907
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/20/2020 10:38:04 AM	49907
Surr: DNOP	81.4	55.1-146		%Rec	1	1/20/2020 10:38:04 AM	49907
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	2.9		mg/Kg	1	1/20/2020 12:02:24 PM	G65910
Surr: BFB	83.4	66.6-105		%Rec	1	1/20/2020 12:02:24 PM	G65910
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.014		mg/Kg	1	1/20/2020 12:02:24 PM	B65910
Toluene	ND	0.029		mg/Kg	1	1/20/2020 12:02:24 PM	B65910
Ethylbenzene	ND	0.029		mg/Kg	1	1/20/2020 12:02:24 PM	B65910
Xylenes, Total	ND	0.058		mg/Kg	1	1/20/2020 12:02:24 PM	B65910
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	1/20/2020 12:02:24 PM	B65910

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

Qualifiers:

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

Analytical Report
Lab Order **2001729**
Date Reported: **1/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-17
Project: Lateral C 7 Loop Jan 2020 **Collection Date:** 1/17/2020 10:20:00 AM
Lab ID: 2001729-003 **Matrix:** MEOH (SOIL) **Received Date:** 1/18/2020 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	140	60		mg/Kg	20	1/20/2020 11:37:25 AM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/20/2020 10:47:10 AM	49907
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/20/2020 10:47:10 AM	49907
Surr: DNOP	78.9	55.1-146		%Rec	1	1/20/2020 10:47:10 AM	49907
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	1/20/2020 12:25:52 PM	G65910
Surr: BFB	82.4	66.6-105		%Rec	1	1/20/2020 12:25:52 PM	G65910
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.015		mg/Kg	1	1/20/2020 12:25:52 PM	B65910
Toluene	ND	0.030		mg/Kg	1	1/20/2020 12:25:52 PM	B65910
Ethylbenzene	ND	0.030		mg/Kg	1	1/20/2020 12:25:52 PM	B65910
Xylenes, Total	ND	0.059		mg/Kg	1	1/20/2020 12:25:52 PM	B65910
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	1/20/2020 12:25:52 PM	B65910

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

Qualifiers:

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

Analytical Report
Lab Order **2001729**
Date Reported: **1/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-18
Project: Lateral C 7 Loop Jan 2020 **Collection Date:** 1/17/2020 10:25:00 AM
Lab ID: 2001729-004 **Matrix:** MEOH (SOIL) **Received Date:** 1/18/2020 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	210	60		mg/Kg	20	1/20/2020 11:49:50 AM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/20/2020 10:56:14 AM	49907
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/20/2020 10:56:14 AM	49907
Surr: DNOP	79.0	55.1-146		%Rec	1	1/20/2020 10:56:14 AM	49907
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	1/20/2020 12:49:24 PM	G65910
Surr: BFB	80.8	66.6-105		%Rec	1	1/20/2020 12:49:24 PM	G65910
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.017		mg/Kg	1	1/20/2020 12:49:24 PM	B65910
Toluene	ND	0.034		mg/Kg	1	1/20/2020 12:49:24 PM	B65910
Ethylbenzene	ND	0.034		mg/Kg	1	1/20/2020 12:49:24 PM	B65910
Xylenes, Total	ND	0.068		mg/Kg	1	1/20/2020 12:49:24 PM	B65910
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	1/20/2020 12:49:24 PM	B65910

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

Qualifiers:

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

Analytical Report
Lab Order **2001729**
Date Reported: **1/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-19
Project: Lateral C 7 Loop Jan 2020 **Collection Date:** 1/17/2020 10:30:00 AM
Lab ID: 2001729-005 **Matrix:** MEOH (SOIL) **Received Date:** 1/18/2020 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	95	60		mg/Kg	20	1/20/2020 12:02:15 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/20/2020 11:05:21 AM	49907
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/20/2020 11:05:21 AM	49907
Surr: DNOP	79.9	55.1-146		%Rec	1	1/20/2020 11:05:21 AM	49907
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	1/20/2020 1:12:57 PM	G65910
Surr: BFB	81.6	66.6-105		%Rec	1	1/20/2020 1:12:57 PM	G65910
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	1/20/2020 1:12:57 PM	B65910
Toluene	ND	0.038		mg/Kg	1	1/20/2020 1:12:57 PM	B65910
Ethylbenzene	ND	0.038		mg/Kg	1	1/20/2020 1:12:57 PM	B65910
Xylenes, Total	ND	0.076		mg/Kg	1	1/20/2020 1:12:57 PM	B65910
Surr: 4-Bromofluorobenzene	92.0	80-120		%Rec	1	1/20/2020 1:12:57 PM	B65910

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

Qualifiers:

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

Analytical Report
Lab Order **2001729**
Date Reported: **1/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-20
Project: Lateral C 7 Loop Jan 2020 **Collection Date:** 1/17/2020 10:35:00 AM
Lab ID: 2001729-006 **Matrix:** MEOH (SOIL) **Received Date:** 1/18/2020 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	150	60		mg/Kg	20	1/20/2020 12:14:40 PM	49911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/20/2020 11:14:27 AM	49907
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/20/2020 11:14:27 AM	49907
Surr: DNOP	78.8	55.1-146		%Rec	1	1/20/2020 11:14:27 AM	49907
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	1/20/2020 1:36:33 PM	G65910
Surr: BFB	80.9	66.6-105		%Rec	1	1/20/2020 1:36:33 PM	G65910
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.017		mg/Kg	1	1/20/2020 1:36:33 PM	B65910
Toluene	ND	0.035		mg/Kg	1	1/20/2020 1:36:33 PM	B65910
Ethylbenzene	ND	0.035		mg/Kg	1	1/20/2020 1:36:33 PM	B65910
Xylenes, Total	ND	0.070		mg/Kg	1	1/20/2020 1:36:33 PM	B65910
Surr: 4-Bromofluorobenzene	92.9	80-120		%Rec	1	1/20/2020 1:36:33 PM	B65910

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001729**

22-Jan-20

Client: ENSOLUM

Project: Lateral C 7 Loop Jan 2020

Sample ID: **MB-49911** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **49911** RunNo: **65902**

Prep Date: **1/20/2020** Analysis Date: **1/20/2020** SeqNo: **2264169** Units: **mg/Kg**

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

Sample ID: **LCS-49911** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **49911** RunNo: **65902**

Prep Date: **1/20/2020** Analysis Date: **1/20/2020** SeqNo: **2264170** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001729**
22-Jan-20

Client: ENSOLUM
Project: Lateral C 7 Loop Jan 2020

Sample ID: **LCS-49907** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49907** RunNo: **65901**
Prep Date: **1/20/2020** Analysis Date: **1/20/2020** SeqNo: **2263253** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	63.9	124			
Surr: DNOP	4.1		5.000		81.0	55.1	146			

Sample ID: **MB-49907** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49907** RunNo: **65901**
Prep Date: **1/20/2020** Analysis Date: **1/20/2020** SeqNo: **2263254** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.0		10.00		80.5	55.1	146			

Sample ID: **LCS-49861** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49861** RunNo: **65901**
Prep Date: **1/16/2020** Analysis Date: **1/21/2020** SeqNo: **2263856** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		107	55.1	146			

Sample ID: **LCS-49891** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49891** RunNo: **65901**
Prep Date: **1/17/2020** Analysis Date: **1/20/2020** SeqNo: **2263857** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.0		5.000		79.2	55.1	146			

Sample ID: **MB-49861** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49861** RunNo: **65901**
Prep Date: **1/16/2020** Analysis Date: **1/21/2020** SeqNo: **2263860** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		108	55.1	146			

Sample ID: **MB-49891** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49891** RunNo: **65901**
Prep Date: **1/17/2020** Analysis Date: **1/20/2020** SeqNo: **2263861** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		89.4	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001729**
22-Jan-20

Client: ENSOLUM
Project: Lateral C 7 Loop Jan 2020

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G65910**	RunNo: **65910**
Prep Date:	Analysis Date: **1/20/2020**	SeqNo: **2263618** 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	770		1000		77.4	66.6	105			

Sample ID: **2.5ug gro lcsb**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G65910**	RunNo: **65910**
Prep Date:	Analysis Date: **1/20/2020**	SeqNo: **2263619** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.0	80	120			
Surr: BFB	890		1000		88.5	66.6	105			

Sample ID: **mb-49896**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **49896**	RunNo: **65910**
Prep Date: **1/17/2020**	Analysis Date: **1/20/2020**	SeqNo: **2263634** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	820		1000		82.0	66.6	105			

Sample ID: **lcs-49896**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **49896**	RunNo: **65910**
Prep Date: **1/17/2020**	Analysis Date: **1/20/2020**	SeqNo: **2263635** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		87.9	66.6	105			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001729**

22-Jan-20

Client: ENSOLUM

Project: Lateral C 7 Loop Jan 2020

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

Client ID: **PBS** Batch ID: **B65910** RunNo: **65910**

Prep Date: Analysis Date: **1/20/2020** SeqNo: **2263650** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.0	80	120			

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

Client ID: **LCSS** Batch ID: **B65910** RunNo: **65910**

Prep Date: Analysis Date: **1/20/2020** SeqNo: **2263651** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	99.8	80	120			
Toluene	0.99	0.050	1.000	0	99.5	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.6	80	120			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.4	80	120			

Sample ID: **mb-49896** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **49896** RunNo: **65910**

Prep Date: **1/17/2020** Analysis Date: **1/20/2020** SeqNo: **2263654** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		94.7	80	120			

Sample ID: **LCS-49896** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **49896** RunNo: **65910**

Prep Date: **1/17/2020** Analysis Date: **1/20/2020** SeqNo: **2263655** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		92.1	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM AZTEC** Work Order Number: **2001729** RcptNo: **1**

Received By: **Erin Melendrez** **1/18/2020 10:00:00 AM**

Completed By: **Erin Melendrez** **1/18/2020 10:47:53 AM**

Reviewed By: MA 1/18/20

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

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

Adjusted? _____

Checked by: ENM 1/18/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Released to Imaging: 5/16/2022 1:26:13 PM

Received by OCD: 10/29/2020 8:14:21 AM

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: Ksummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 100%

Project Name: Lateral C-7 Loop (Jan 2020)

Project #: See notes

Project Manager: Ksummers

Sampler: RDeechilly

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 1.0+0.1(CF)=1.1°C

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No 2001729	BTEX / ~~MTBE / TMB's~~ (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
1/17/20	1010	S	S-15	1x4oz Jar	cool	-001	X	X									X
1/17/20	1015	S	S-16	1x4oz Jar	cool	-002	X	X									X
1/17/20	1020	S	S-17	1x4oz Jar	cool	-003	X	X									X
1/17/20	1025	S	S-18	1x4oz Jar	cool	-004	X	X									X
1/17/20	1030	S	S-19	1x4oz Jar	cool	-005	X	X									X
1/17/20	1035	S	S-20	1x4oz Jar	cool	-006	X	X									X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
1/17/20	1250				1/17/20	1250
1/17/20	1743			Courier	1/18/20	1000

Remarks: SAME DAY
PM - Tom Long (EPROD)
Pay Key - RB21200
Non AFE - N45551
Seal intact on cooler-ENM 1/18/20

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 27, 2020

Kyle Summers

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

RE: Lateral C7 Loop Jan 2020 OrderNo.: 2001962

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/24/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2001962**
Date Reported: **1/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-21
Project: Lateral C7 Loop Jan 2020 **Collection Date:** 1/23/2020 10:00:00 AM
Lab ID: 2001962-001 **Matrix:** MEOH (SOIL) **Received Date:** 1/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	230	60		mg/Kg	20	1/24/2020 11:07:14 AM	50025
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**CLP**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	1/24/2020 9:41:22 AM	50023
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/24/2020 9:41:22 AM	50023
Surr: DNOP	110	55.1-146		%Rec	1	1/24/2020 9:41:22 AM	50023
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	17		mg/Kg	5	1/24/2020 10:10:57 AM	G66055
Surr: BFB	89.8	66.6-105		%Rec	5	1/24/2020 10:10:57 AM	G66055
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.083		mg/Kg	5	1/24/2020 10:10:57 AM	B66055
Toluene	ND	0.17		mg/Kg	5	1/24/2020 10:10:57 AM	B66055
Ethylbenzene	ND	0.17		mg/Kg	5	1/24/2020 10:10:57 AM	B66055
Xylenes, Total	ND	0.33		mg/Kg	5	1/24/2020 10:10:57 AM	B66055
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	5	1/24/2020 10:10:57 AM	B66055

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001962**

27-Jan-20

Client: ENSOLUM

Project: Lateral C7 Loop Jan 2020

Sample ID: **MB-50025** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **50025** RunNo: **66053**

Prep Date: **1/24/2020** Analysis Date: **1/24/2020** SeqNo: **2269609** Units: **mg/Kg**

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

Sample ID: **LCS-50025** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **50025** RunNo: **66053**

Prep Date: **1/24/2020** Analysis Date: **1/24/2020** SeqNo: **2269611** Units: **mg/Kg**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001962**

27-Jan-20

Client: ENSOLUM

Project: Lateral C7 Loop Jan 2020

Sample ID: **MB-50023** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **50023** RunNo: **66047**
Prep Date: **1/24/2020** Analysis Date: **1/24/2020** SeqNo: **2268100** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		108	55.1	146			

Sample ID: **LCS-50023** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **50023** RunNo: **66047**
Prep Date: **1/24/2020** Analysis Date: **1/24/2020** SeqNo: **2268101** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	104	63.9	124			
Surr: DNOP	5.1		5.000		103	55.1	146			

Sample ID: **2001962-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-21** Batch ID: **50023** RunNo: **66047**
Prep Date: **1/24/2020** Analysis Date: **1/24/2020** SeqNo: **2268174** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	9.4	46.77	0	108	47.4	136			
Surr: DNOP	5.1		4.677		109	55.1	146			

Sample ID: **LCS-50000** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **50000** RunNo: **66058**
Prep Date: **1/23/2020** Analysis Date: **1/24/2020** SeqNo: **2268880** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		78.9	55.1	146			

Sample ID: **MB-50000** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **50000** RunNo: **66058**
Prep Date: **1/23/2020** Analysis Date: **1/24/2020** SeqNo: **2268883** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.6		10.00		85.8	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001962**
27-Jan-20

Client: ENSOLUM
Project: Lateral C7 Loop Jan 2020

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **G66055** RunNo: **66055**
Prep Date: Analysis Date: **1/24/2020** SeqNo: **2268890** 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	840		1000		84.4	66.6	105			

Sample ID: **2.5ug gro lcsb** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **G66055** RunNo: **66055**
Prep Date: Analysis Date: **1/24/2020** SeqNo: **2268891** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.5	80	120			
Surr: BFB	950		1000		95.1	66.6	105			

Sample ID: **2001962-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-21** Batch ID: **G66055** RunNo: **66055**
Prep Date: Analysis Date: **1/24/2020** SeqNo: **2268894** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	73	17	83.11	0	87.6	69.1	142	5.33	20	
Surr: BFB	3200		3325		94.9	66.6	105	0	0	

Sample ID: **2001962-001ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-21** Batch ID: **G66055** RunNo: **66066**
Prep Date: Analysis Date: **1/25/2020** SeqNo: **2268987** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	77	17	83.11	0	92.4	69.1	142			
Surr: BFB	3200		3325		96.1	66.6	105			

Sample ID: **mb-50028** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **50028** RunNo: **66066**
Prep Date: **1/24/2020** Analysis Date: **1/25/2020** SeqNo: **2268988** Units: **%Rec**

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: **lcs-50028** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **50028** RunNo: **66066**
Prep Date: **1/24/2020** Analysis Date: **1/25/2020** SeqNo: **2268989** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.4	66.6	105			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001962**

27-Jan-20

Client: ENSOLUM

Project: Lateral C7 Loop Jan 2020

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

Client ID: **PBS** Batch ID: **B66055** RunNo: **66055**

Prep Date: Analysis Date: **1/24/2020** SeqNo: **2268945** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.0	80	120			

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

Client ID: **LCSS** Batch ID: **B66055** RunNo: **66055**

Prep Date: Analysis Date: **1/24/2020** SeqNo: **2268946** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.1	80	120			
Toluene	0.87	0.050	1.000	0	87.4	80	120			
Ethylbenzene	0.83	0.050	1.000	0	83.2	80	120			
Xylenes, Total	2.5	0.10	3.000	0	83.0	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: **2001962-001AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-21** Batch ID: **B66055** RunNo: **66055**

Prep Date: Analysis Date: **1/24/2020** SeqNo: **2268948** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	2.8	0.083	3.325	0	85.1	78.5	119			
Toluene	2.7	0.17	3.325	0	82.1	75.7	123			
Ethylbenzene	2.6	0.17	3.325	0	77.1	74.3	126			
Xylenes, Total	7.7	0.33	9.974	0	77.2	72.9	130			
Surr: 4-Bromofluorobenzene	3.2		3.325		96.6	80	120			

Sample ID: **2001962-001AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-21** Batch ID: **B66055** RunNo: **66055**

Prep Date: Analysis Date: **1/24/2020** SeqNo: **2268949** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.3	0.083	3.325	0	98.8	78.5	119	14.9	20	
Toluene	3.2	0.17	3.325	0	96.4	75.7	123	16.0	20	
Ethylbenzene	3.2	0.17	3.325	0	96.7	74.3	126	22.5	20	R
Xylenes, Total	9.6	0.33	9.974	0	96.5	72.9	130	22.2	20	R
Surr: 4-Bromofluorobenzene	3.2		3.325		95.0	80	120	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001962**

27-Jan-20

Client: ENSOLUM

Project: Lateral C7 Loop Jan 2020

Sample ID: **mb-50028** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **50028** RunNo: **66066**

Prep Date: **1/24/2020** Analysis Date: **1/25/2020** SeqNo: **2269004** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		96.9	80	120			

Sample ID: **LCS-50028** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **50028** RunNo: **66066**

Prep Date: **1/24/2020** Analysis Date: **1/25/2020** SeqNo: **2269005** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM AZTEC** Work Order Number: **2001962** RcptNo: 1

Received By: **Isaiah Ortiz** **1/24/2020 8:00:00 AM** I-Ox

Completed By: **Isaiah Ortiz** **1/24/2020 8:13:29 AM** I-Ox

Reviewed By: IO 1/24/2020

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

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

Adjusted? _____

Checked by: JR 1/24/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Released to Imaging: 5/16/2022 1:26:13 PM
Received by OCD: 10/29/2020 8:14:21 AM

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 100% Same Day

Project Name: Lateral C-7 Loop (Jan 2020)

Project #: See notes

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 2.1 - 0 [CF] 2.1 °C

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2001962	BTEX / ~~MTBE / TMB's~~ (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
1/23/20	1000	S	S-21	1x4oz Jar	cool	-001	X	X									X

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/23/20	1541		Christen Walden		1/23/20	1541
1/23/20	1753	Christen Walden		courier	1/24/20	0800

Remarks: SAME DAY
PM-Tom Long (EPROD)
PayKey- RB21200
Non AFE- N45551

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

ENSOLUM

APPENDIX G

Regulatory Correspondence

From: Smith, Cory, EMNRD
To: Long, Thomas; Steve Austin
Cc: Stone, Brian
Subject: RE: Lateral C-7 Loop - UL G Section 25 T27N R9W; 36.549324 -107.736168
Date: Thursday, January 23, 2020 7:41:58 AM

Tom,

Thank you for the notification, OCD approves the request to sample early.

OCD approval does not relive Enterprise of any other requirements imposed by other regulatory agencies.

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: Thursday, January 23, 2020 7:38 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXT] FW: Lateral C-7 Loop - UL G Section 25 T27N R9W; 36.549324 -107.736168

Cory/Steve,

This email is a follow up to our phone conversation this morning. Enterprise will be collecting the final soil sample today from the Lateral C-7 Loop excavation after we get it dug out. This sample will be analyzed for Chlorides only.

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

Enterprise Products

From: Long, Thomas
Sent: Tuesday, January 21, 2020 1:39 PM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: FW: Lateral C-7 Loop - UL G Section 25 T27N R9W; 36.549324 -107.736168

Cory/Steve,

Please find the attached site sketch and lab reports for the Lateral C-7 Loop. S-16 failed for chlorides. We will be excavating that area tomorrow and sampling as stated in the previous email.

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

Enterprise Products

From: Long, Thomas
Sent: Tuesday, January 21, 2020 1:01 PM
To: 'Smith, Cory, EMNRD' <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: Lateral C-7 Loop - UL G Section 25 T27N R9W; 36.549324 -107.736168

Cory,

Sorry, they were collected the January 17, 2020. In addition, we will be sampling again at the Lateral C-7 excavation tomorrow, January 22, 2020 at 1:00 p.m. As that some of the sample results exceed Tier I standards. I will be sending all of lab results later today. If you have any questions, please call or email.

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

Enterprise Products

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Tuesday, January 21, 2020 7:54 AM
To: Long, Thomas <tjlong@eprod.com>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: Lateral C-7 Loop - UL G Section 25 T27N R9W; 36.549324 -107.736168

Tom,

Were samples collected on Friday or Saturday the 18th?

Thanks

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: Thursday, January 16, 2020 1:57 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXT] FW: Lateral C-7 Loop - UL G Section 25 T27N R9W; 36.549324 -107.736168

Cory/Steve,

The email is to notify you that Enterprise will be collecting soil samples from the remaining areas of the Lateral C-7 Loop excavation that require sampling, tomorrow, January 18, 2020 at 10:00 a.m. If you have any questions, please call or email.

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

Enterprise Products

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Thursday, January 16, 2020 8:17 AM
To: Long, Thomas <tjlong@eprod.com>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: Lateral C-7 Loop - UL G Section 25 T27N R9W; 36.549324 -107.736168

Tom,

OCD approves Enterprises request to sample prior to the 48 notice.

Please include this approval in your final C-141.

OCD approval does not relieve Enterprise of any other requirements imposed by other regulatory agencies.

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: Thursday, January 16, 2020 7:40 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXT] FW: Lateral C-7 Loop - UL G Section 25 T27N R9W; 36.549324 -107.736168

Cory/Steve,

This is a follow up to our phone conversation yesterday. Enterprise proceeded with collection of soil samples for laboratory analysis with verbal approval from NMOCD. Enterprise utilized the 200 square foot sampling interval. If you have any questions, please call or email

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

From: Long, Thomas
Sent: Wednesday, January 8, 2020 3:31 PM
To: 'Steve Austin' <nnepawq@frontiernet.net>; 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>
Subject: Lateral C-7 Loop - UL G Section 25 T27N R9W; 36.549324 -107.736168

Cory/Steve,

This email is a notification that Enterprise had a release of natural gas on the Lateral C-7 Loop pipeline today. No liquids were release to the ground surface. The pipeline was isolated, depressurized, locked out and tagged out. The release site is located at UL G Section 25 T27N R9W; 36.549324 -107.736168. The release is located in a wash (blue line on a USGS Topo). I will keep you informed of the remediation activities. If you have any questions, please call or email.

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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.

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District IV
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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 10910

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 10910
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/16/2022