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: **241602**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)* **nAPP2315932501**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.918942** Longitude **-108.018772** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Case LS#9**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **06/08/2023**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
D	**8**	**31N**	**11W**	**San Juan**

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **Estimated 10-15 BBLs**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **0.624 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release On June 2, 2023, Enterprise had a release of natural gas and natural gas liquids from the Case LS#9 pipeline. The pipeline was isolated, depressurized, locked and tagged out. No fire nor injuries occurred. No liquids were observed on the ground surface. Repairs and remediation began on June 8, 2023, at which time Enterprise determined the release reportable per NMOCD regulation, due to the volume of impacted subsurface soil. Repairs and remediation were completed on June 16, 2023. The final excavation dimensions measured approximately 38 feet long by 30 feet wide by 17 feet deep. A total of 1,072 cubic yards of hydrocarbon impacted soil was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm. A third party closure report is included with this "Final" C-141.

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: Thomas Long Title: Senior Environmental Scientist

Signature: Thomas Long Date: 08-25-2023

email: tjlong@eprod.com Telephone: (505) 599-2286

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: 12/07/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

CLOSURE REPORT

Property:

Case LS #9 (06/08/23)
Unit Letter D, S8 T31N R11W
San Juan County, New Mexico

New Mexico EMNRD OCD Incident ID No. NAPP2315932501

August 21, 2023

Ensolum Project No. 05A1226245

Prepared for:

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

Prepared by:

Chad D'Aponti
Project Scientist

Kyle Summers
Senior Managing Geologist

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Case LS #9 (06/08/23) (Site)
NM EMNRD OCD Incident ID No.	NAPP2315932501
Location:	36.918942° North, 108.018772° West Unit Letter D, Section 8, Township 31 North, Range 11 West San Juan County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico (NM) Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On June 2, 2023, a release of natural gas from the Case LS #9 pipeline was identified by a third party. Enterprise verified the release and subsequently isolated and locked the pipeline out of service. On June 8, 2023, Enterprise initiated activities to repair the pipeline and remediate petroleum hydrocarbon impact. In addition, Enterprise determined the release was "reportable" due to the estimated volume of impacted soil. The NM EMNRD OCD was subsequently notified.

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 NM EMNRD OCD closure criteria.

2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by 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. The appropriate closure criteria for sites are determined using the siting requirements outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. Ensolum utilized the general site characteristics and information available from NM state agency databases and federal agency geospatial databases to determine the appropriate closure criteria for the Site. Supporting figures and documentation associated with the following Siting bullets are provided in **Appendix B**.

- The NM Office of the State Engineer (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 in the same Public Land Survey System (PLSS) section as the Site. One POD (SJ-03858-POD1) was identified in an adjacent section. The depth to water for this POD is 85 feet below grade surface (bgs). This POD is approximately 1.6 miles southwest of the Site and approximately 120 feet lower in elevation than the Site (**Figure A**, **Appendix B**).

- Four cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in the adjacent PLSS sections. These CPWs are depicted on **Figure B** (**Appendix B**). Two of the closest CPWs are located less than 1.0 mile from the Site. Documentation for the cathodic protection well located near the Grenier #4 and #14 well locations indicate a depth to water at 34 feet bgs and 120 feet bgs. This cathodic protection well is located approximately 0.91 miles northwest of the Site and is approximately 93 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Grenier #101 well location indicates a depth to water of approximately 120 feet bgs. This cathodic protection well is located approximately 0.98 miles southwest of the Site and is approximately 11 feet higher in elevation than the Site.

- The Site is located within 300 feet of a NM EMNRD OCD-defined continuously flowing watercourse or significant watercourse (**Figure C**, **Appendix B**). Two stock ponds are located within 300 feet of the Site.

- 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 (**Figure D**, **Appendix B**).

- No springs, or private domestic freshwater wells used by less than five households for domestic or stock watering purposes were identified within 500 feet of the Site (**Figure E**, **Appendix B**).

- No freshwater wells or springs were identified within 1,000 feet of the Site (**Figure E**, **Appendix B**).

- 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 within 300 feet of a wetland (**Figure F**, **Appendix B**).

- Based on information identified in the NM Mining and Minerals Division's Geographic Information System (GIS) Maps and Mine Data database, the Site is not within an area overlying a subsurface mine (**Figure G**, **Appendix B**).

- The Site is not located within an unstable area per Paragraph (6) of Subsection U of 19.15.2.7 NMAC.

- Based on information provided by the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is not within a 100-year floodplain (**Figure H**, **Appendix B**).

Based on available information, the applicable closure criteria for soils remaining in place at the Site include:

Tier I Closure Criteria for Soils Impacted by a Release		
Constituent[1]	**Method**	**Limit**
Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
TPH (GRO+DRO+MRO)[2]	EPA SW-846 Method 8015	100 mg/kg
BTEX[3]	EPA SW-846 Method 8021 or 8260	50 mg/kg
Benzene	EPA SW-846 Method 8021 or 8260	10 mg/kg

[1] – Constituent concentrations are in milligrams per kilogram (mg/kg).
[2] – Total Petroleum Hydrocarbons (TPH). Gasoline Range Organics (GRO). Diesel Range Organics (DRO). Motor Oil/Lube Oil Range Organics (MRO).
[3] – Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX).

3.0 SOIL REMEDIATION ACTIVITIES

On June 8, 2023, Enterprise initiated activities to repair the pipeline and remediate petroleum hydrocarbon impact resulting from the release. During the remediation and corrective action activities, West States Energy Contractors Inc, (WSEC), provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 38 feet long and 30 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 17 feet bgs. The lithology encountered during the completion of remediation activities consisted primarily of silty sand underlain by sandstone.

Approximately 1,072 cubic yards (yd^3) of petroleum hydrocarbon-affected soil and 65 barrels (bbls) of hydro-excavation soil cuttings and water were transported to the Envirotech, Inc., (Envirotech) landfarm near Hilltop, NM for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix C**. The excavation was backfilled with imported fill and then contoured to the surrounding topography.

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

4.0 SOIL SAMPLING PROGRAM

Ensolum field screened the soil samples from the excavation utilizing a calibrated Dexsil PetroFLAG® hydrocarbon analyzer 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 22 composite soil samples (S-1 through S-17, S-3a, S-4a, S-5a, S-7a, and S-8a) from the excavation for laboratory analysis. The composite samples were comprised of five aliquots each and represent an estimated 200 square foot (ft^2) or less sample area per guidelines outlined in Section D of 19.15.29.12 NMAC. Hand tools or the excavator bucket were utilized to obtain fresh aliquots from each area of the excavation. Regulatory correspondence is provided in **Appendix E**.

First Sampling Event

On June 12, 2023, sampling was performed at the Site. The NM EMNRD OCD was notified of the sampling event although no representative was present during sampling activities. Composite soil samples S-1 (17'), S-2 (17'), S-3 (11.5'), S-4 (11.5'), S-5 (7'), and S-6 (7') were collected from the floor of the excavation. Composite soil samples S-7 (0' to 7'), S-8 (0' to 7'), S-9 (0' to 7'), S-10 (0' to 11.5'), S-11 (0' to 17'), S-12 (0' to 17'), S-13 (0' to 17'), S-14 (0' to 17'), S-15 (0' to 17'), S-16

(0' to 11.5'), and S-17 (0' to 7') were collected from the walls of the excavation. Subsequent soil analytical results identified total BTEX and TPH concentrations that exceeded the NM EMNRD OCD closure criteria for composite soil samples S-3, S-4, S-5, S-7, and S-8.

Second Sampling Event

In response to the exceedances of composite samples S-3, S-4, S-5, S-7, and S-8 during the first sampling event, the impacted soils were removed by excavation and transported to the landfarm for disposal/remediation. On June 16, 2023, a second sampling event was performed at the Site. The NM EMNRD OCD was notified of the sampling event although no representative was present during sampling activities. Composite soil samples S-3a (12'), S-4a (12'), and S-5a (7.5') were collected from the floor of the excavation. Composite soil samples S-7a (0' to 7'), and S-8a (0' to 7') were collected from the walls of the excavation.

All 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, NM, under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for BTEX using Environmental Protection Agency (EPA) SW-846 Method 8021; TPH GRO/DRO/MRO using EPA SW-846 Method 8015; and chlorides using EPA Method 300.0.

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

6.0 SOIL DATA EVALUATION

Ensolum compared the benzene, BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (S-1, S-2, S-3a, S-4a, S-5a, S-6, S-7a, S-8a, and S-9 through S-17) to the applicable NM EMNRD OCD closure criteria. In the event that the laboratory did not quantify a result for BTEX or chloride, Ensolum compared the laboratory supplied PQLs/RLs to the New Mexico EMNRD OCD closure criteria. Due to the high PQLs/RLs associated with the TPH MRO ranges when using EPA SW-846 Method #8015, Ensolum only compared the quantified TPH results to the New Mexico EMNRD OCD closure criteria. The soils associated with composite soil samples S-3, S-4, S-5, S-7, and S-8 were removed from the Site, and therefore, are not included in the following discussion. The laboratory analytical results are summarized in **Table 1** (**Appendix F**).

- The laboratory analytical results for composite soil samples S-1, S-2, and S-6 indicate benzene concentrations of 0.057 mg/kg, 0.21 mg/kg, and 0.076 mg/kg, respectively, which are less than the NM EMNRD OCD closure criteria of 10 mg/kg. The laboratory analytical results for all other composite soil samples associated with soil remaining at the Site indicate total benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 10 mg/kg.

- The laboratory analytical results for composite soil samples S-1, S-2, S-6, S-9, S-10, S-12, S-13, and S-17 indicate total BTEX concentrations ranging from 0.10 mg/kg (S-13 and S-17) to 9.6 mg/kg (S-2), which are less than the New Mexico EMNRD OCD closure criteria of 50 mg/kg. The laboratory analytical results for all other composite soil samples associated with

soil remaining at the Site indicate total BTEX is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for composite soil samples S-1, S-2, S-3a, S-4a, S-6, and S-7a indicate total combined TPH GRO/DRO/MRO concentrations ranging from 8.9 mg/kg (S-6) to 91 mg/kg (S-2), which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for all other composite soil samples associated with soil remaining at the Site indicate total combined TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for composite soil samples S-1, S-2, S-6, and S-9 through S-17 indicate chloride concentrations ranging from 61 mg/kg (S-11) to 160 mg/kg (S-16 and S-17), which are less than the NM EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for all other composite soil samples associated with soil remaining at the Site indicate chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 600 mg/kg.

7.0 RECLAMATION AND REVEGETATION

The excavation was backfilled with imported fill and then contoured to the surrounding topography.

8.0 FINDINGS AND RECOMMENDATION

- Twenty-two composite soil samples were collected from the Site. Based on laboratory analytical results, no benzene, BTEX, chloride, or total combined TPH GRO/DRO/MRO exceedances were identified in the soils remaining at the Site.

- Approximately 1,072 yd^3 of petroleum hydrocarbon-affected soil and 65 bbls of hydro-excavation soil cuttings and water were transported to the Envirotech landfarm for disposal/remediation. The excavation was backfilled with imported fill and then contoured to the surrounding topography.

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.

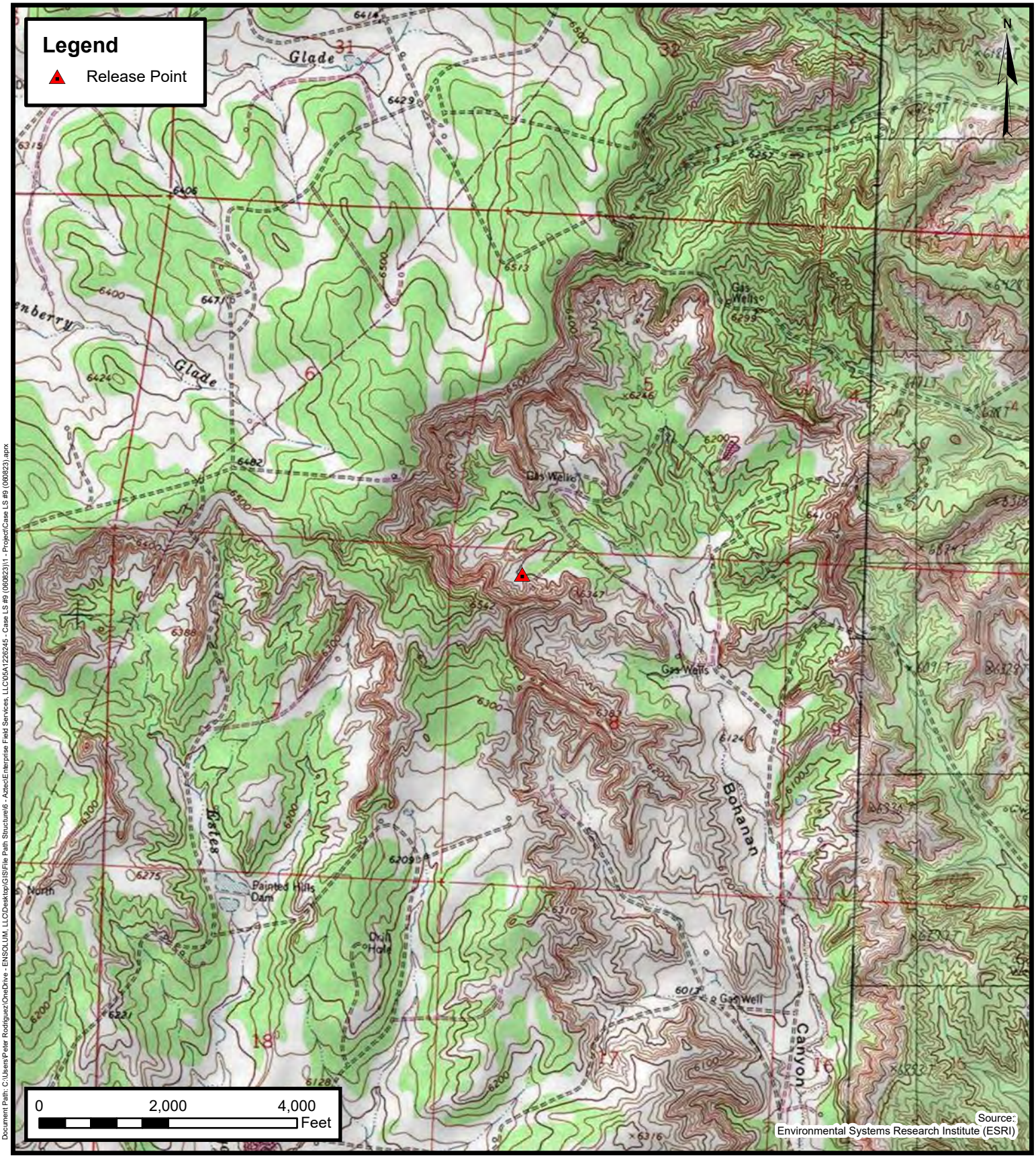
9.3 Reliance

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 Closure Report and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

ENSOLUM

APPENDIX A

Figures



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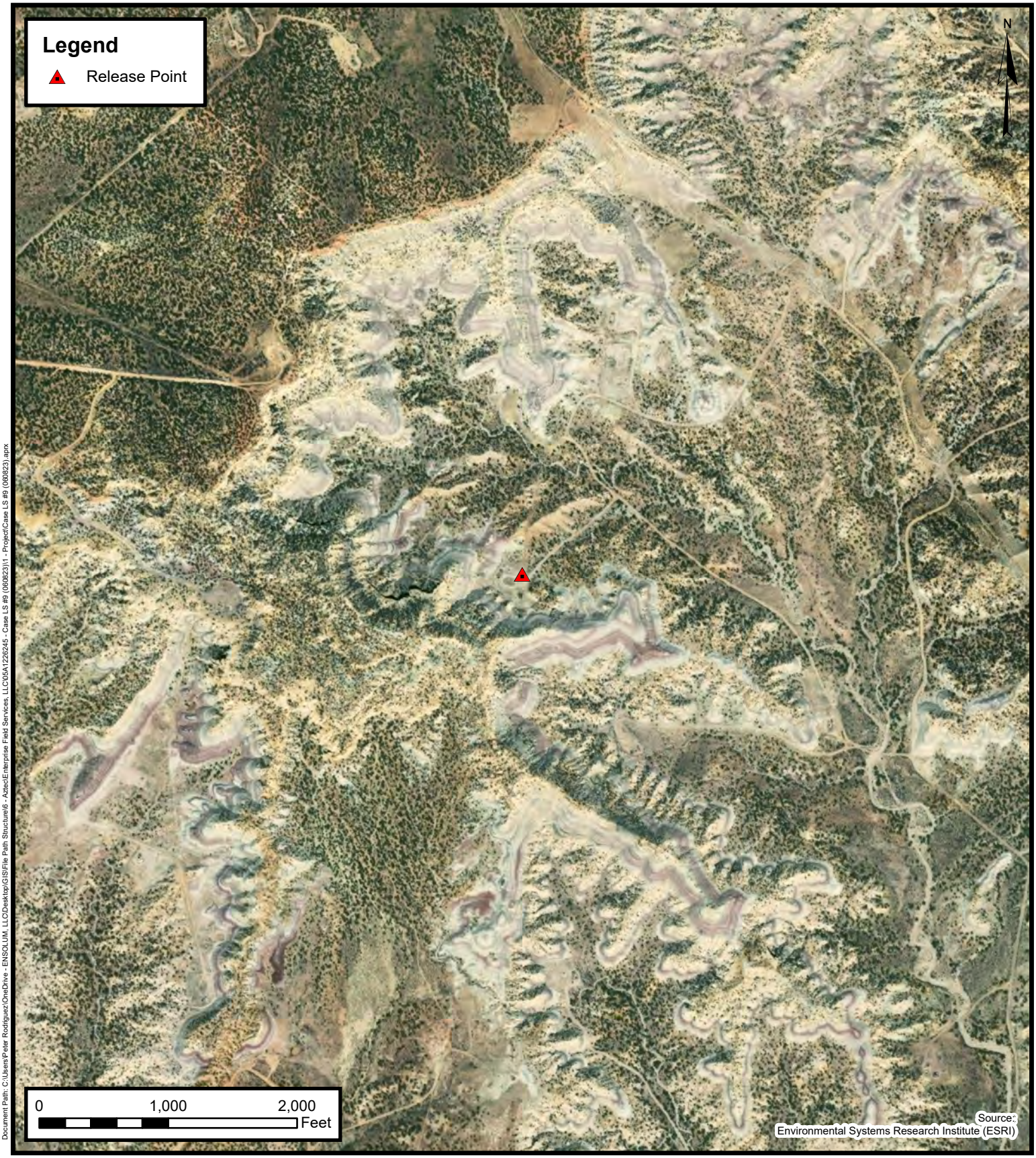
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Topographic Map

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE

1



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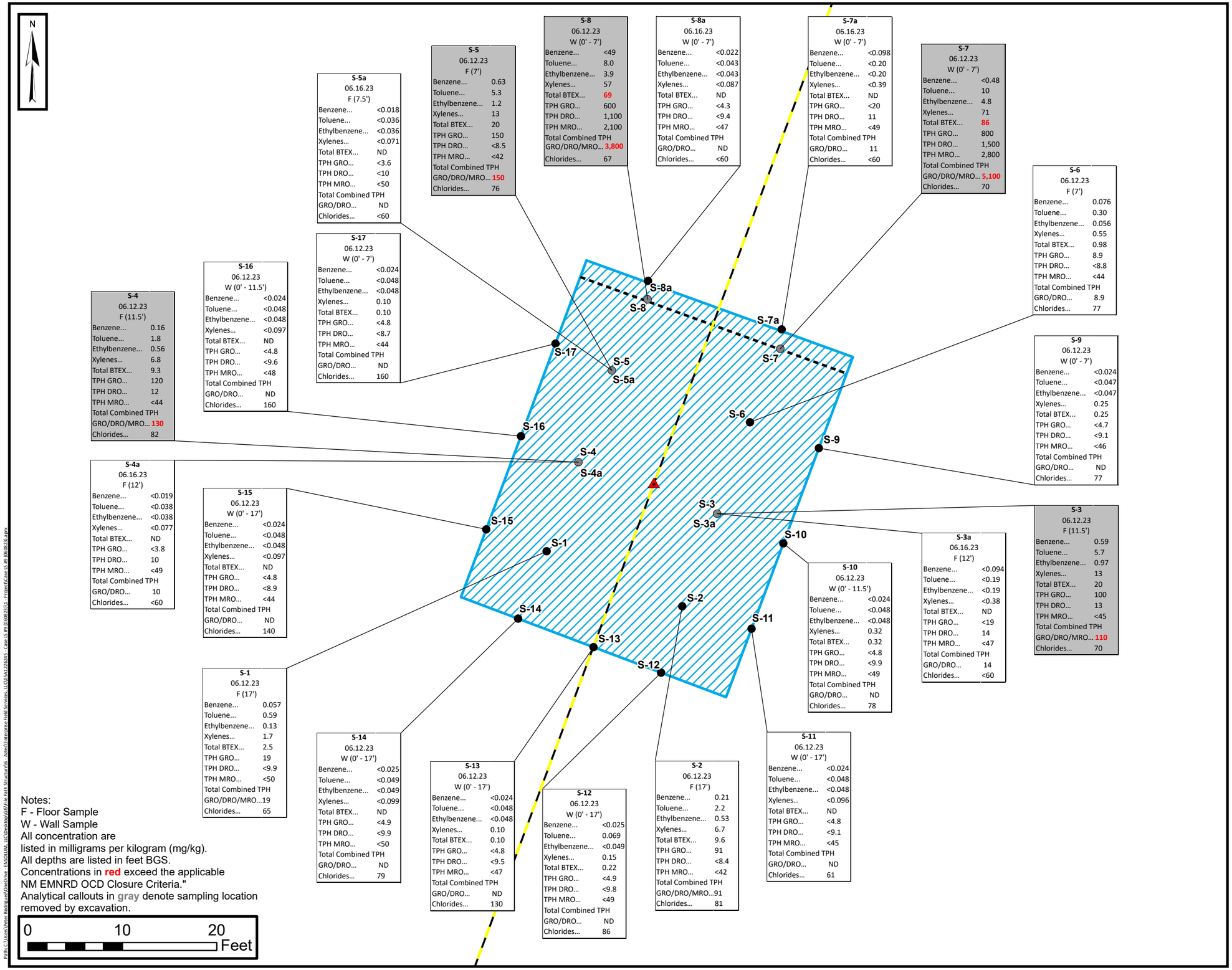
Site Vicinity Map

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE
2



LEGEND

- Release Point
- Composite Soil Sample Location
- Composite Soil Sample Removed by Excavation
- Pipeline Location
- Former Wall
- Excavation Extent

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Site Map with Soil Analytical Results

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Unit Letter D, S8 T31N R11W
San Juan County, New Mexico
36.918942, -108.018772

Figure

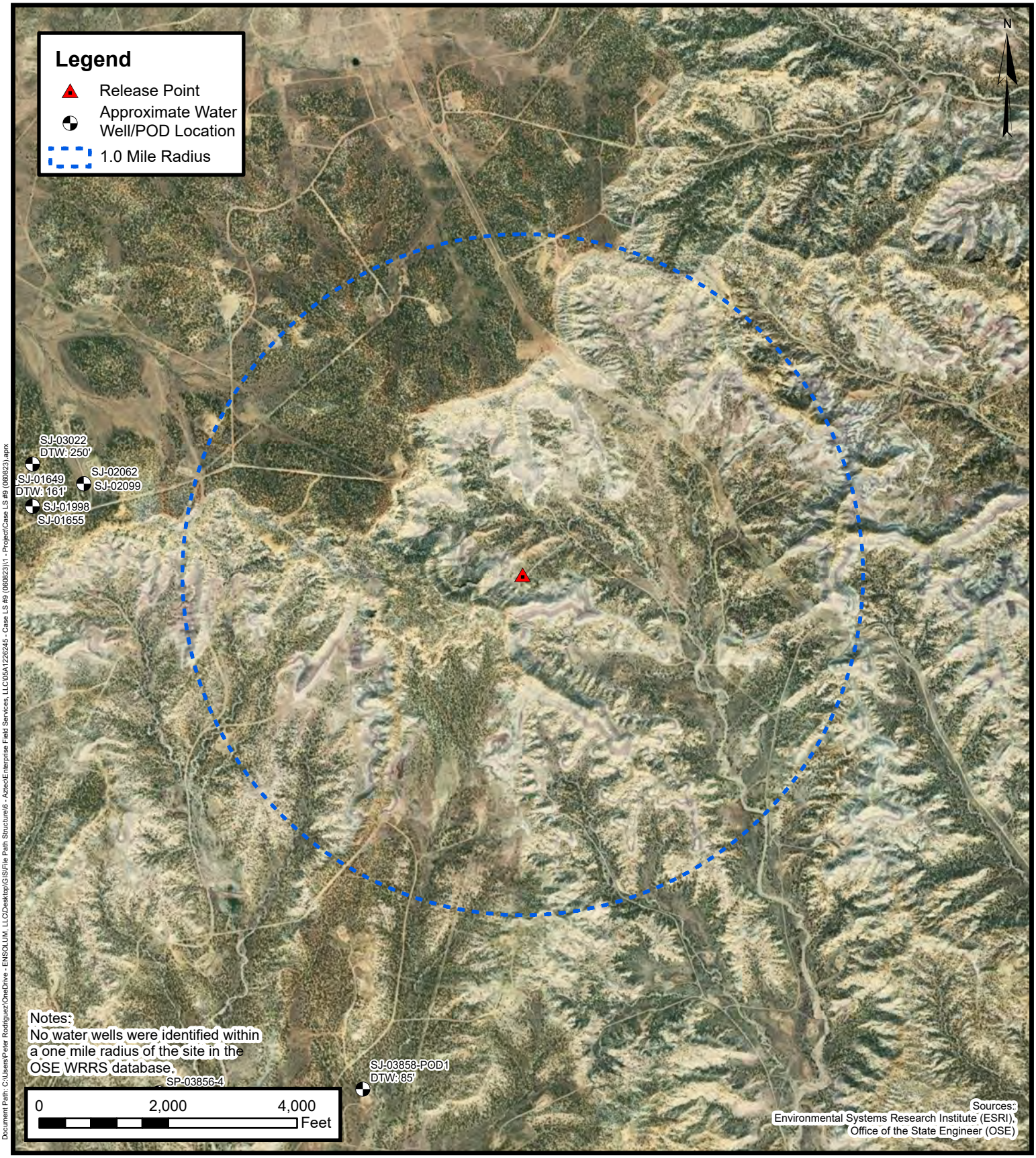
3

Project Number: 05A1226245

ENSOLUM

APPENDIX B

Siting Figures and Documentation



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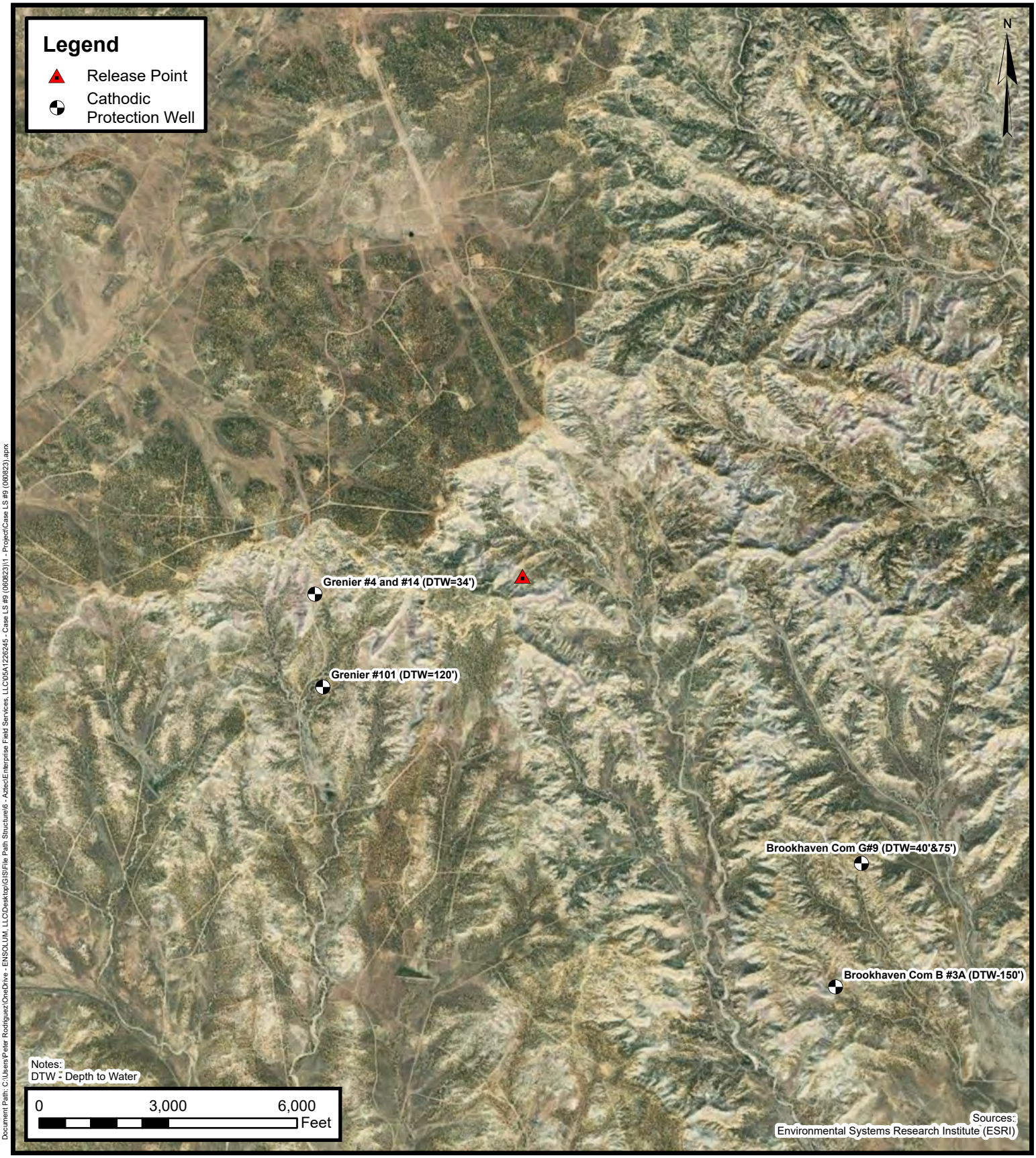
1.0 Mile Radius Water Well/ Pod Location Map

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE

A



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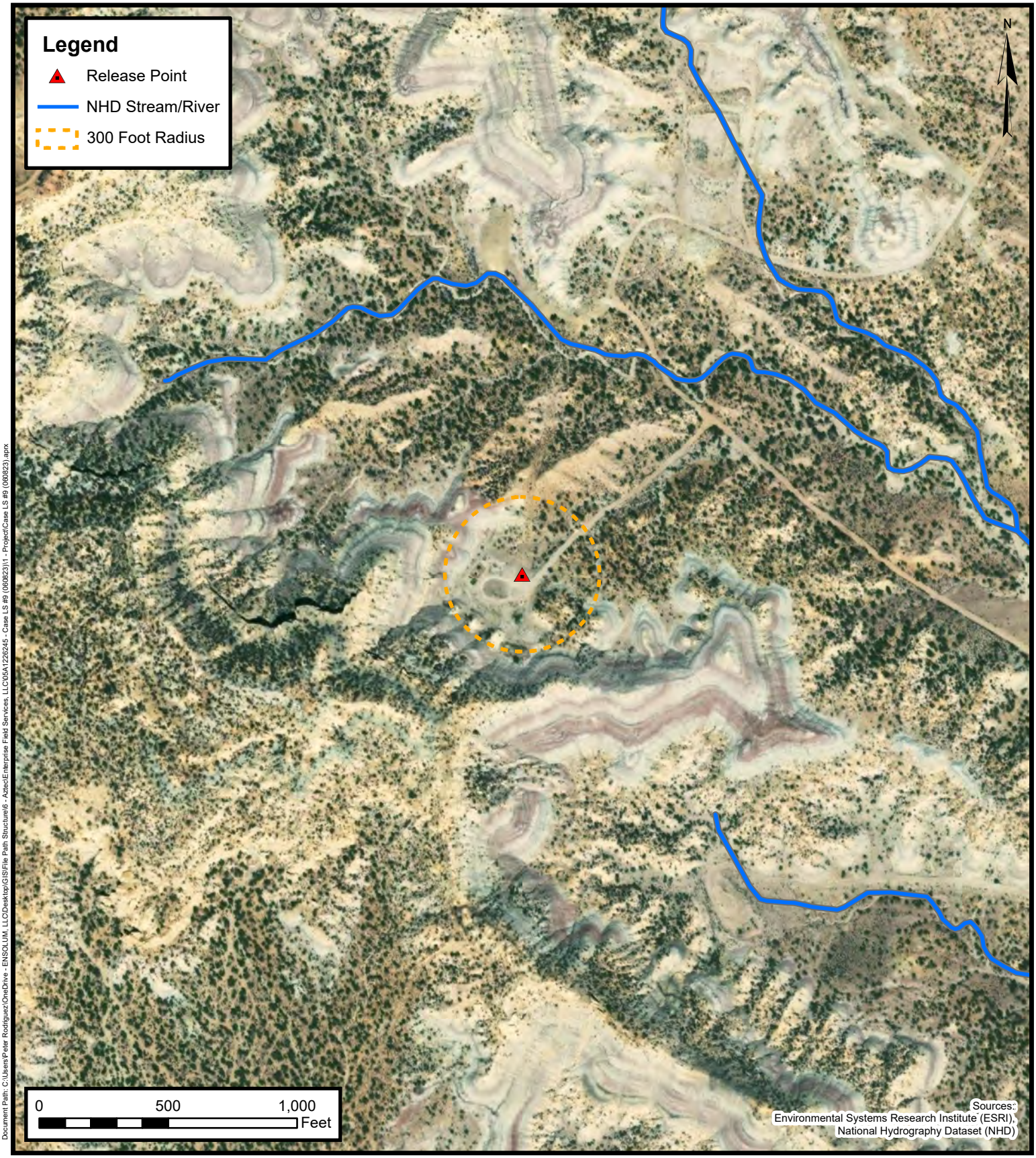
Environmental, Engineering and Hydrogeologic Consultants

Cathodic Protection Well Recorded Depth to Water

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE
B



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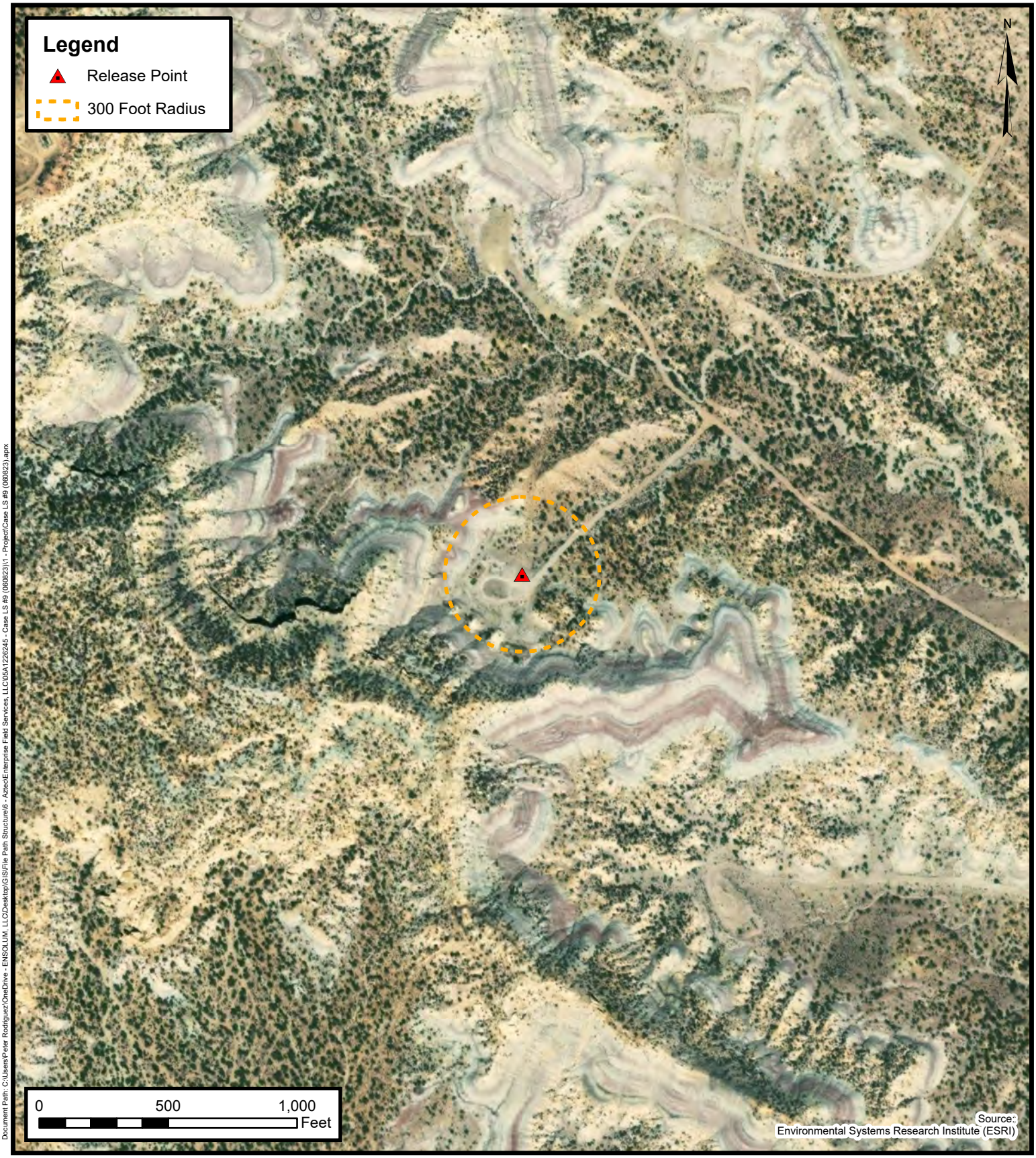
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

300 Foot Radius Watercourse and Drainage Identification

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE

C



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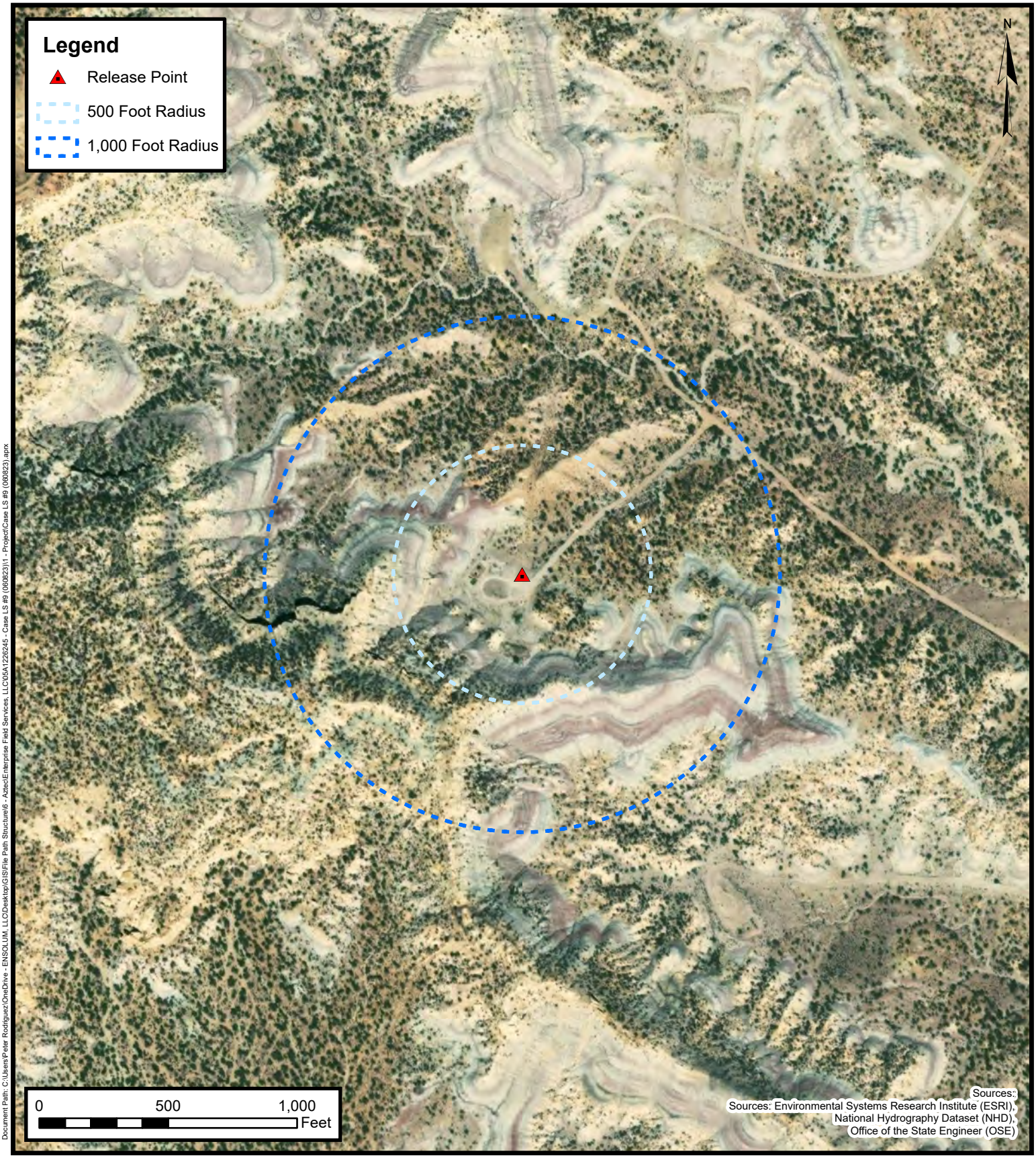
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

300 Foot Radius Occupied Structure Identification

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE

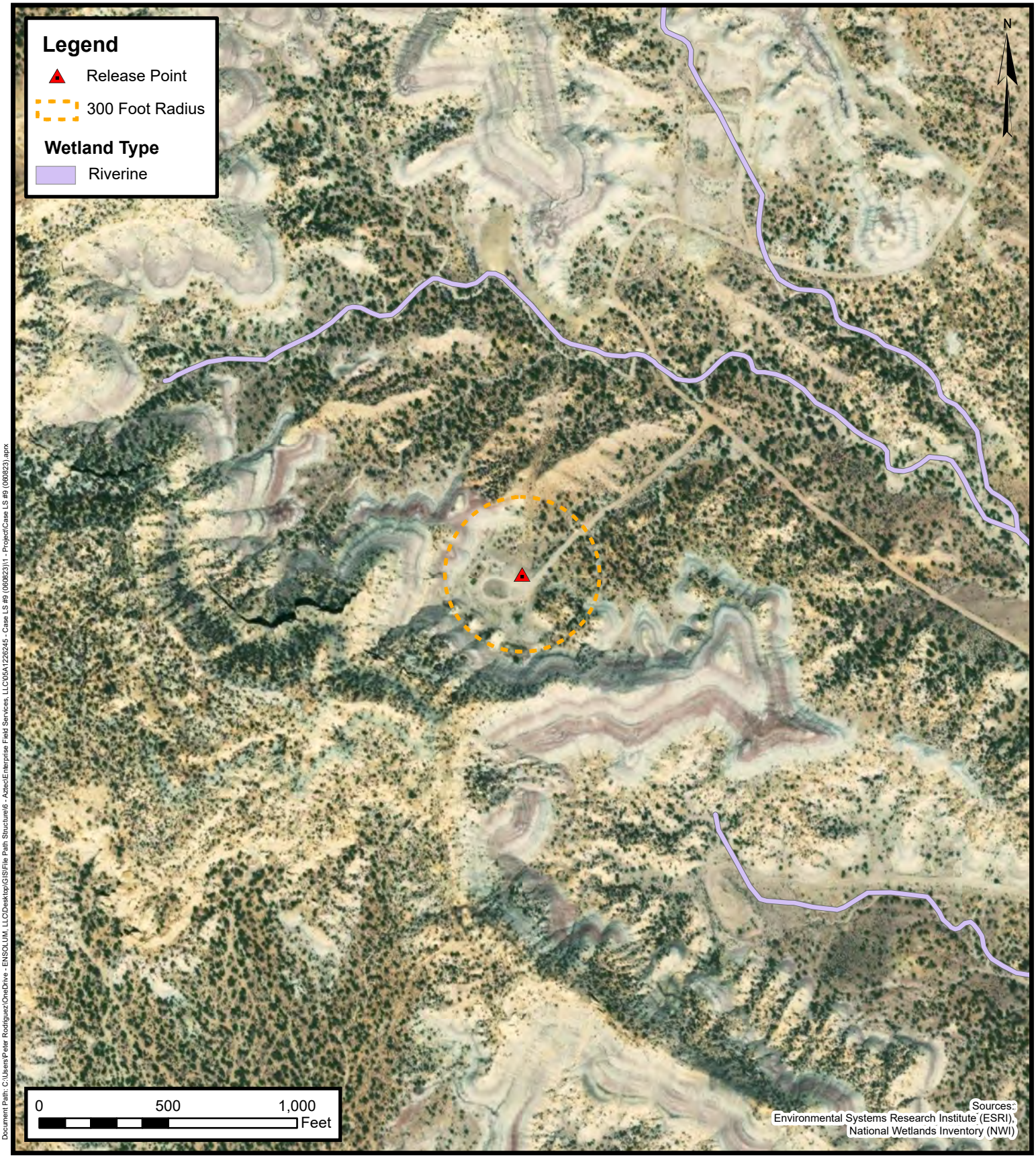
D



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Water Well and Natural Spring Location
Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE
E

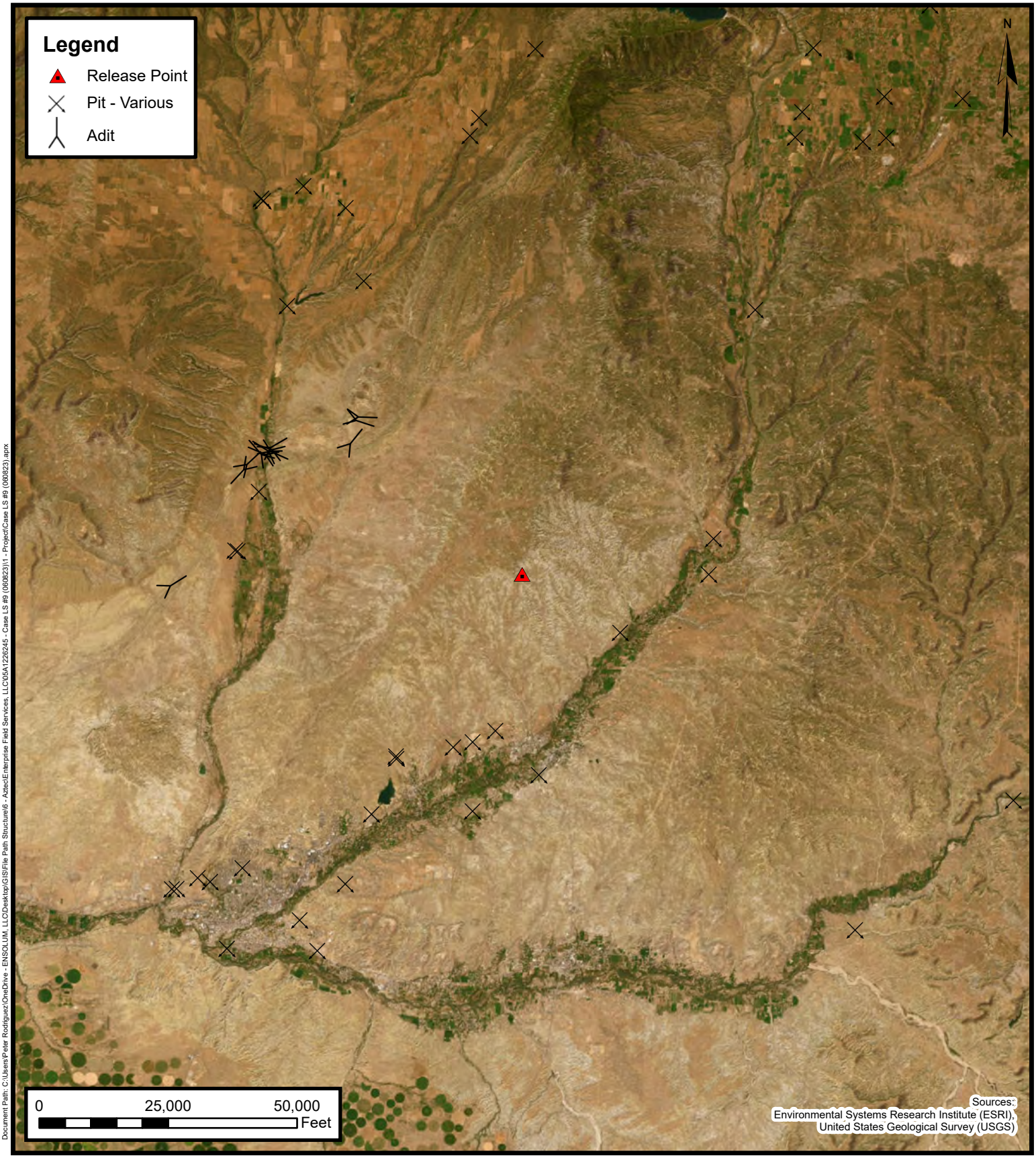


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Wetlands

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE
F



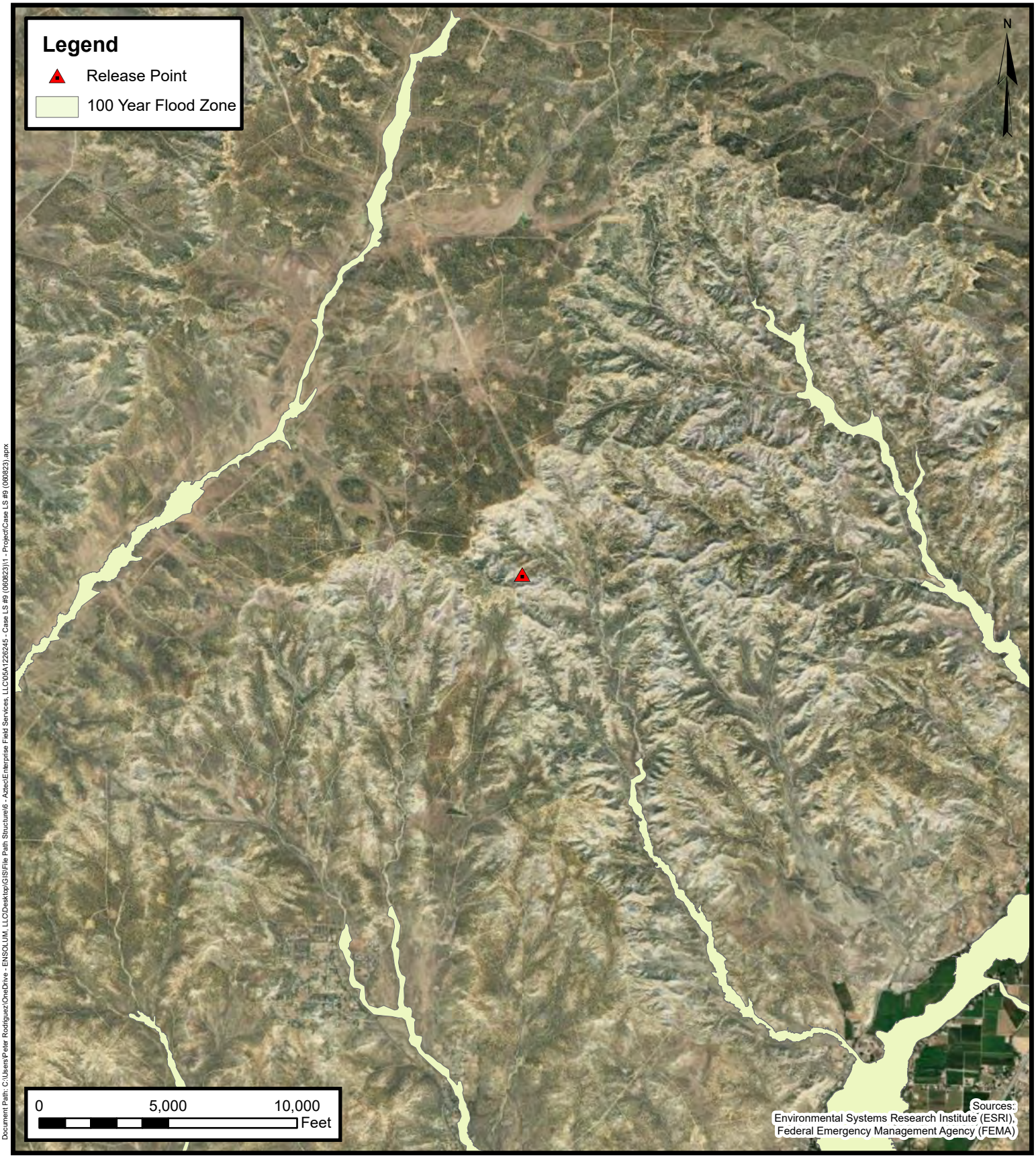
Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226245 - Case LS #9 (060823)\1 - Project\Case LS #9 (060823).aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Mines, Mills, and Quarries

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE
G



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\GIS\File Path Structure\6 - Aztec\Enterprise Field Services, LLC\05A1226245 - Case LS #9 (060823)\1 - Project\Case LS #9 (060823).aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

100-Year Flood Plain Map

Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Project Number: 05A1226245
Unit Letter D, S8 T31N R11W, San Juan County, New Mexico
36.918942, -108.018772

FIGURE
H

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

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 03858 POD1	SJ	SJ	3	2	4	18	31N	11W	230326	4087706	295	85	210

Average Depth to Water: **85 feet**

Minimum Depth: **85 feet**

Maximum Depth: **85 feet**

Record Count: 1

PLSS Search:

Section(s): 8, 4, 5, 6, 7, 9, 16, 17, 18 **Township:** 31N **Range:** 11W

30-045-10949 GRENIER #4

30-045-10952 GRENIER #14 Y 3665

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICO

Operator Meridian Oil Inc. Location: Unit D Sec. 07 Twp 31 Rng 11

Name of Well/Wells or Pipeline Serviced

Grenier #4 And #14

Elevation ____ Completion Date 3-25-93 Total Depth 436' Land Type F

Casing Strings, Sizes, Types & Depths 3/12 SET 98 Of 8" PVC CASING.

No Gas or Boulders Were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented

With 19 Sacks

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

None

Depths & thickness of water zones with description of water: Fresh, Clear,

Salty, Sulphur, Etc. Hit Fresh Water At 34'. More Water

at 120'- Fresh

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 436'

6400 lbs Loresco

Depths anodes placed: (1)- 415, 405, 395, 385, 375, 365, 355, 345, 335, 325, 280, 270, 260, 245, 235

Depths vent pipes placed: Surface to 436'

Vent pipe perforations: From 200' to 436'

Remarks: No gas encountered during drilling

RECEIVED
JAN 31 1994
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.

API WATER ANALYSIS REPORT FORM

Laboratory No. 25-930417-1D

Company	Sample No.	Date Sampled
MERIDIAN OIL		3-25-93

Field	Legal Description	County or Parish	State
4060 W	D-7, 31-11	SJ	NM

Lease or Unit	Well	Depth	Formation	Water, B/D
	Greenies #4	120'		

Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By
	C.P. Ground Bed	D. Ashworth

TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

DISSOLVED SOLIDS

CATIONS	*mg/l*	*me/l*
Sodium, Na (calc.)	1900	82
Calcium, Ca	400	20
Magnesium, Mg	17	1.4
Barium, Ba		

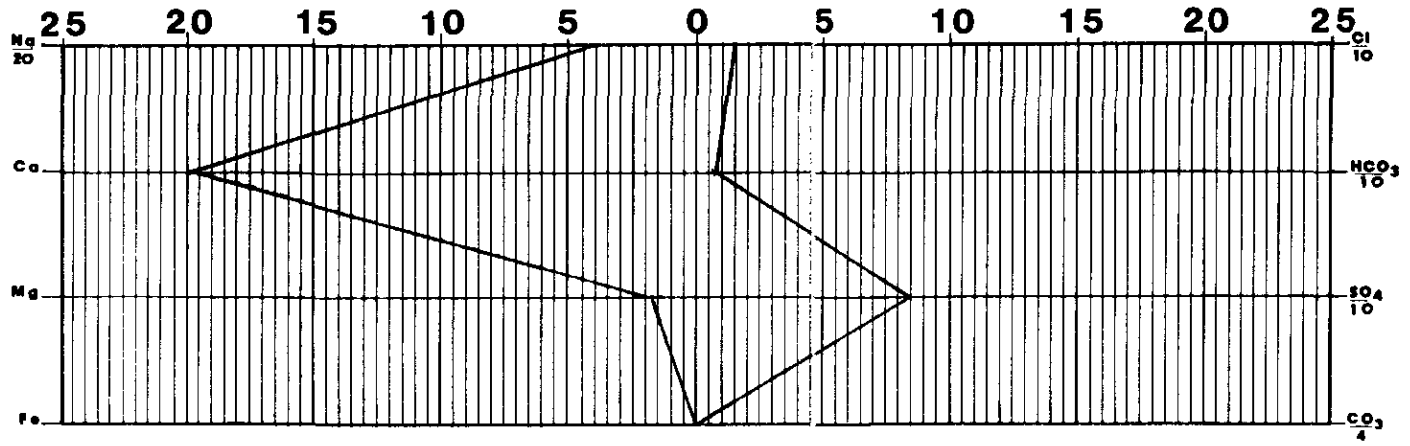
ANIONS		
Chloride, Cl	500	14
Sulfate, So_4	4000	84
Carbonate, CO_3	-	-
Bicarbonate, HCO_3	340	5.6

OTHER PROPERTIES

pH	7.57
Specific Gravity, 60/60 F.	1.0071
Resistivity (ohm-meters) 71 F.	1.5
Total Dissolved Solids (calc.)	7100
Iron, Fe (total)	
Sulfide, as H_2S	

REMARKS & RECOMMENDATIONS:

ATTN: BILL DONAHUE



Date Received	Preserved	Date Analyzed	Analyzed By
April 17th, 1993		April 20th 1993	C.H.

644

30-045-27241

E

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICO

22684

Operator Meridian Location: Unit K Sec. 7 Twp 31 Rng 11

Name of Well/Wells or Pipeline Serviced Grenier #101

Elevation ____ Completion Date 10/15/91 Total Depth 400' Land Type F

Casing Strings, Sizes, Types & Depths 100' of 8" PVC WITH 25 SACKS of Cement

If Casing Strings are cemented, show amounts & types used 100' of 8" PVC WITH 25 SACKS

If Cement or Bentonite Plugs have been placed, show depths & amounts used None

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. HIT WATER AT 120', WAS FRESH

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: Drilled 400' AND Used 40 SACKS Lotesco AND 34 SACKS Asbury (5700#)

Depths anodes placed: 380, 370, 360, 280, 270, 260, 250, 190, 180, 170, 140, + 130

Depths vent pipes placed: Surface TO 400'

Vent pipe perforations: Bottom 280'

Remarks:

RECEIVED
FEB 24 1992
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.

CPS GROUND BED CONSTRUCTION WORKSHEET

CPS# 2268W	P/L NAME(s), NUMBER(s) Grenier #101					
T # I774	TOTAL	VOLTS 11.7	AMPS 27.3	OHMS .43	DATE 10/15/91	NAME JOHN L. MOSS

REMARKS (notes for construction log) Driller Hit Water AT 120'.

Bottom 280' of Vent Pipe is Perforated. Hole Depth 400'

DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #
100			295	2.4		490			685		
105			300	2.1		495			690		
110	1.5		305	2.2		500			695		
115	1.5		310	2.1		505			700		
120	1.4		315	2.4		510			ANODE #	DEPTH	NO COKE
125	2.5		320	1.2		515					
130	3.7	12	325	1.2		520			1	380	2.6
135	2.9		330	1.3		525			2	370	2.9
140	2.6	11	335	1.0		530			3	360	2.7
145	2.1		340	1.2		535			4	280	3.0
150	1.8		345	1.9		540			5	270	3.2
155	2.1		350	1.4		545			6	260	3.6
160	2.5		355	2.4		550			7	250	2.7
165	3.8		360	3.0	3	555			8	190	4.1
170	3.6	10	365	2.9		560			9	180	4.2
175	3.8		370	2.8	2	565			10	170	3.9
180	4.1	9	375	2.5		570			11	140	2.8
185	3.5		380	2.6	1	575			12	130	3.1
190	4.2	8	385	1.8		580			13		
195	3.3		390	1.5		585			14		
200	2.9		395	1.4		590			15		
205	2.2		400			595			16		
210	2.3		405			600			17		
215	1.5		410			605			18		
220	1.4		415			610			19		
225	1.8		420			615			20		
230	1.3		425			620			21		
235	1.3		430			625			22		
240	1.1		435			630			23		
245	1.5		440			635			24		
250	3.4	7	445			640			25		
255	3.0		450			645			26		
260	3.2	6	455			650			27		
265	3.1		460			655			28		
270	3.0	5	465			660			29		
275	2.9		470			665			30		
280	2.9	4	475			670					
285	2.6		480			675					
290	2.5		485			680					

DISTRIBUTION — original — permanent CPS FILE
copy — Division Corrosion Supervisor
copy — Region Corrosion Specialist

22 W

API WATER ANALYSIS REPORT FORM

Laboratory No. 25 - 911108 - 1B

Company		Sample No.	Date Sampled
MERIDIAN			10 - 15 - 91

Field	Legal Description	County or Parish	State
2268W	K - 7 - 31 - 11	SAN JUAN	N.M

Lease or Unit	Well	Depth	Formation	Water, B/D
Glenick	# 101	120'	Works Table	

Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By
Produced		J. L. MOSS

TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

DISSOLVED SOLIDS

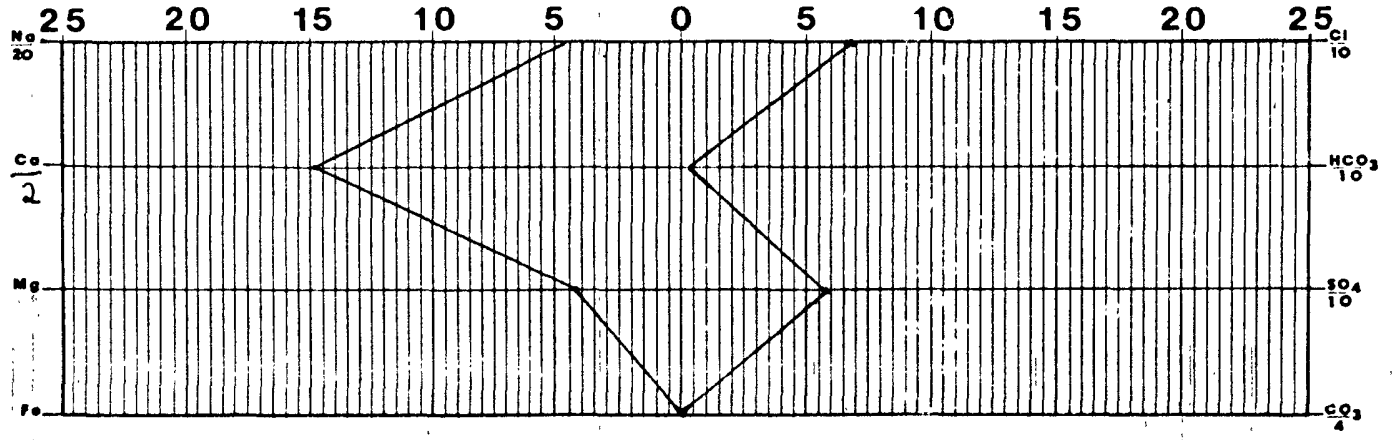
CATIONS	mg/l	me/l
Sodium, Na (calc.)	2,190	95
Calcium, Ca	591	29.5
Magnesium, Mg	52.2	4.5
Barium, Ba		

ANIONS	mg/l	me/l
Chloride, Cl	2,410	68
Sulfate, So_4	2,730	56.8
Carbonate, CO_3	-	-
Bicarbonate, HCO_3	844	4.0

OTHER PROPERTIES

pH	6.94
Specific Gravity, 60/60 F.	1.0103
Resistivity (ohm-meters) ____ F.	0.9
Total Dissolved Solids (calc.)	8,220
Iron, Fe (total)	
Sulfide, as H_2S	

REMARKS & RECOMMENDATIONS: ATTN: C.W. DONOHUE



Date Received	Preserved	Date Analyzed	Analyzed By
8th Nov, 1991.		23rd Dec, 1991.	R. H.

30-045-10770

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 H Sec. 16 Twp 31 Rng 11

Name of Well/Wells or Pipeline Serviced BROOKHAVEN COM G #9

cps 2029w

Elevation 6125' Completion Date 11/1/88 Total Depth 320' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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. 40' & 75' NO SAMPLE

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 255', 245', 230', 210', 195', 175', 165', 155', 140', 115'

Depths vent pipes placed: 314'

Vent pipe perforations: 280'

Remarks: gb #1

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.

FM-07-0238 (Rev. 10-82)

WELL CASING

CATHODIC PROTECTION CONSTRUCTION REPORT

DAILY LOG

Comp 11-7-88 ✓

Drilling Log (Attach Hereto) ☐ **Completion Date** 11/1/88

CPS	Well Name, Line or Plant:	Work Order #	State:	Ins. Union Check
2029 W	BROOKHAVEN COM G-#9	50720A	.64V 600' S.	☒ Good ☐ Bad

Location:	Anode Size:	Anode Type:	Size Bit:
H-16-31-11	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
320'	314'				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	255	245	230	210	195	175	165	155	140	115
Anode Output (Amps)	6.4	6.6	5.5	5.1	4.9	6.0	6.2	5.5	5.7	5.0
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 11.9	Amps 28.6	Ohms .42		

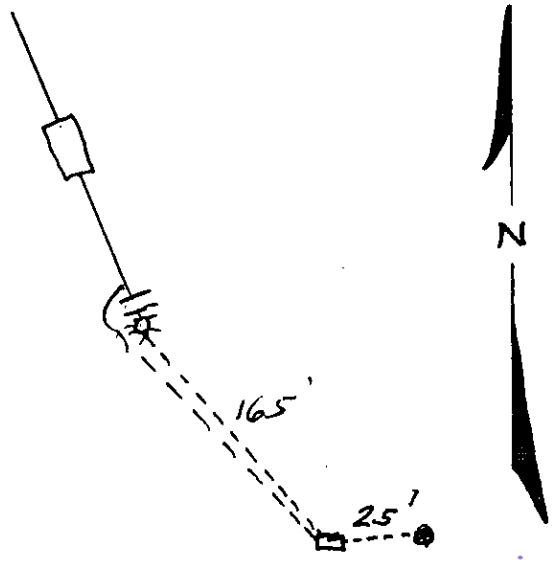
Remarks: WATER AT 40' & 75' COULD NOT GET WATER SAMPLE. INSTALLED 314' of 1" PVC VENT PIPE, PERFORATED 280'.

LAYED 1/2" FUEL LINE IN WIRE DITCH.

	G.B.	4170.00
~~Rectifier Size:~~	V. A	7695.00
Addn'l Depth	0	
Depth Credit:	-186	-651.00 ✓
Extra Cable:	195' .25	48.75 ✓
Ditch & 1 Cable:	190' .75	142.50 ✓
~~Ditch & 2 Cable~~:		
25' Meter Pole:	0	
20' Meter Pole:	0	
10' Stub Pole:	0	
Junction Box:	1	249.00
		11654.25 ✓
	TAX	582.71 ✓
	TOTAL	$ 12236.96 OK JS

All Construction Completed

(Signature)



6125

D. Crass DRILLING CO.

Drill No. 3

DRILLER'S WELL LOG

S. P. No. Brookhaven #9 Com C Date 11-1-88

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	15	Sandstone
15	20	Sand "
20	35	Sandstone
35	40	Sand "
40	60	Sandstone
60	80	Sand "
80	100	Sandstone
100	170	Shale
170	185	Sandstone
185	210	Shale
210	235	Sandy Shale
235	280	Shale
280-320		Sandy Shale

Mud Bran Lime

Rock Bit Number Make

Remarks: Water @ 1~~8~~' 40' & 75'

Driller Connie Brown

3617

30-045-23575

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS NORTHWESTERN NEW MEXICO

Operator Meridian Oil Co. Location: Unit O Sec. 16 Twp 31 Rng 11

Name of Well/Wells or Pipeline Serviced

Brookhaven Com B #3A

Elevation 5993 Completion Date 4-28-93 Total Depth 367' Land Type S

Casing Strings, Sizes, Types & Depths 12/10 Set 101' of 8" PVC Casing.

NO Gas, Water, or Boulders were Encountered During Casing.

If Casing Strings are cemented, show amounts & types used Cemented

With 25 Sacks.

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

None

Depths & thickness of water zones with description of water: Fresh, Clear,

Salty, Sulphur, Etc. 150' Fresh

Depths gas encountered: None

Ground bed depth with type & amount of coke breeze used: 367'

100 Sacks Asbury

Depths anodes placed: 340, 330, 320, 310, 300, 290, 280, 265, 230, 220, 210, 200, 190, 180, 170

Depths vent pipes placed: 367'

Vent pipe perforations: Bottom 230'

Remarks:

RECEIVED
JAN 31 1994
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.

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

Form C-138
Revised 08/01/11

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

97057-1125

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

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

2. Originating Site:
Case LS#9

AFE: Pending
PM: Gary Turner
Pay Key: RB21200

2. Location of Material (Street Address, City, State or ULSTR):
UL D Section 8 T31N R11W; 36.918942, -108.018772.

June 2023

4. Source and Description of Waste:
Source: Hydrocarbon contaminated soil associated with remediation activities from a natural gas pipeline release.
Description: Hydrocarbon contaminated soil associated with remediation activities from a natural gas pipeline release.
Estimated Volume 50 (yd³) / bbls Known Volume (to be entered by the operator at the end of the haul) 1072/65 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) 6-5-2023, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

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

5. Transporter: TBD

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011**
Address of Facility: **Hill Top, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Enviro Manager DATE: 6/5/23

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

ENSOLUM

APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Ensolum Project No. 05A1226245

ENSOLUM

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

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Ensolum Project No. 05A1226245

ENSOLUM

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

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Case LS #9 (06/08/23)
Ensolum Project No. 05A1226245

ENSOLUM

Photograph 7 Photograph Description: View of the site after initial restoration.	
Photograph 8 Photograph Description: View of the site after initial restoration.	

ENSOLUM

APPENDIX E

Regulatory Correspondence

From: Kyle Summers
To: Chad D"Aponti; Ranee Deechilly
Subject: FW: [EXTERNAL] Case LS #9 - UL D Section 8 T31N R11W; 36.918942, -108.018772 - NMOCD Incident #nAPP2315932501
Date: Monday, June 19, 2023 6:49:23 AM
Attachments: image002.png
image004.png
image005.png
image006.png

Kyle Summers
Principal
903-821-5603
Ensolum, LLC

From: Adeloye, Abiodun A <aadeloye@blm.gov>
Sent: Friday, June 16, 2023 9:55 AM
To: Long, Thomas <tjlong@eprod.com>; Tafoya, Jeffrey J <JTafoya@blm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: RE: [EXTERNAL] Case LS #9 - UL D Section 8 T31N R11W; 36.918942, -108.018772 - NMOCD Incident #nAPP2315932501

[**EXTERNAL EMAIL**]

Hi, Thomas, BLM accept the requested variance.
Thank you.

Abiodun Adeloye (Emmanuel)
Natural Resources Specialist (NRS)
6251 College Blvd., Suite A
Farmington, NM 87402
Office: 505-564-7665
Mobile: 505-635-0984

From: Long, Thomas <tjlong@eprod.com>
Sent: Friday, June 16, 2023 9:17 AM
To: Tafoya, Jeffrey J <JTafoya@blm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Adeloye, Abiodun A <aadeloye@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: RE: [EXTERNAL] Case LS #9 - UL D Section 8 T31N R11W; 36.918942, -108.018772 - NMOCD Incident #nAPP2315932501

Nelson/Emmanuel,

This email is a notification and a variance request. Enterprise is requesting a variance for required 48 hour notification per 19.15.29.12D (1a) NMAC. Enterprise would like to collect soil samples for laboratory analysis today at 12:00 p.m. at Case LS #9 excavation. Two of the samples previous collected exceeded NMOCD remediation standards. Please acknowledge acceptance of this variance request. If you have any questions, please call or email.

Thank you,

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: Tafoya, Jeffrey J <JTafoya@blm.gov>
Sent: Friday, June 9, 2023 10:10 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Long, Thomas <tjlong@eprod.com>; Adeloye, Abiodun A <aadeloye@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: Re: [EXTERNAL] Case LS #9 - UL D Section 8 T31N R11W; 36.918942, -108.018772 - NMOCD Incident #nAPP2315932501

[Use caution with links/attachments]
Thank you Tom,

I'm including Aboidun (Emmanuel) Adeloye in this notice and he will get back you. Thanks, Jeff

---

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Friday, June 9, 2023 9:14 AM
To: Long, Thomas <tjlong@eprod.com>; Tafoya, Jeffrey J <JTafoya@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: Re: [EXTERNAL] Case LS #9 - UL D Section 8 T31N R11W; 36.918942, -108.018772 - NMOCD Incident #nAPP2315932501

Tom,

Thank you for the notice. If an OCD representative is not on-site on the date &/or time given, please sample per 19.15.29 NMAC. For whatever reason, if the sampling timeframe is altered, please notify the OCD as soon as possible so we may adjust our schedule(s). Failure to notify the OCD of this change may result in the closure sample(s) not being accepted.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards,

Nelson Velez • Environmental Specialist - Adv

Environmental Bureau | EMNRD - Oil Conservation Division

1000 Rio Brazos Road | Aztec, NM 87410

(505) 469-6146 | nelson.velez@emnrd.nm.gov

http://www.emnrd.state.nm.us/OCD/

From: Long, Thomas <tjlong@eprod.com>
Sent: Friday, June 9, 2023 9:11 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Jeffrey Tafoya <jtafoya@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: [EXTERNAL] Case LS #9 - UL D Section 8 T31N R11W; 36.918942, -108.018772 - NMOCD Incident #nAPP2315932501

Nelson/Jeff,

This email is a notification that Enterprise will be collecting soil samples for laboratory analysis at the Case LS#9 excavation on Monday June 12, 2023 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

ENSOLUM

APPENDIX F

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Case LS #9 (06/08/23)
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[1] (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (GRO/DRO/MRO)[1] (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria (Tier I)				10	NE	NE	NE	50	NE	NE	NE	100	600
Composite Soil Samples Removed by Excavation and Transported to the Landfarm for Disposal/Remediation													
S-3	06.12.23	C	11.5	0.59	5.7	0.97	13	20	100	13	<45	**110**	70
S-4	06.12.23	C	11.5	0.16	1.8	0.56	6.8	9.3	120	12	<44	**130**	82
S-5	06.12.23	C	7	0.63	5.3	1.2	13	20	150	<8.5	<42	**150**	76
S-7	06.12.23	C	0 to 7	<0.48	10	4.8	71	**86**	800	1,500	2,800	**5,100**	70
S-8	06.12.23	C	0 to 7	<0.49	8.0	3.9	57	**69**	600	1,100	2,100	**3,800**	67
Excavation Composite Soil Samples													
S-1	06.12.23	C	17	0.057	0.59	0.13	1.7	2.5	19	<9.9	<50	19	65
S-2	06.12.23	C	17	0.21	2.2	0.53	6.7	9.6	91	<8.4	<42	91	81
S-3a	06.16.23	C	12	<0.094	<0.19	<0.19	<0.38	ND	<19	14	<47	14	<60
S-4a	06.16.23	C	12	<0.019	<0.038	<0.038	<0.077	ND	<3.8	10	<49	10	<60
S-5a	06.16.23	C	7.5	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<10	<50	ND	<60
S-6	06.12.23	C	7	0.076	0.30	0.056	0.55	0.98	8.9	<8.8	<44	8.9	77
S-7a	06.16.23	C	0 to 7	<0.098	<0.20	<0.20	<0.39	ND	<20	11	<49	11	<60
S-8a	06.16.23	C	0 to 7	<0.022	<0.043	<0.043	<0.087	ND	<4.3	<9.4	<47	ND	<60
S-9	06.12.23	C	0 to 7	<0.024	<0.047	<0.047	0.25	0.25	<4.7	<9.1	<46	ND	77
S-10	06.12.23	C	0 to 11.5	<0.024	<0.048	<0.048	0.32	0.32	<4.8	<9.9	<49	ND	78
S-11	06.12.23	C	0 to 17	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.1	<45	ND	61
S-12	06.12.23	C	0 to 17	<0.025	0.069	<0.049	0.15	0.22	<4.9	<9.8	<49	ND	86
S-13	06.12.23	C	0 to 17	<0.024	<0.048	<0.048	0.10	0.10	<4.8	<9.5	<47	ND	130
S-14	06.12.23	C	0 to 17	<0.025	<0.049	<0.049	<0.099	ND	<4.9	<9.9	<50	ND	79
S-15	06.12.23	C	0 to 17	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<8.9	<44	ND	140
S-16	06.12.23	C	0 to 11.5	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.6	<48	ND	160
S-17	06.12.23	C	0 to 7	<0.024	<0.048	<0.048	0.10	0.10	<4.8	<8.7	<44	ND	160

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

[1] = Total combined concentrations are rounded to two (2) significant figures to match the laboratory resolution of the individual constituents.

ND = Not Detected above the Practical Quantitation Limits (PQLs) or Reporting Limits (RLs)

NA = Not Analyzed

NE = Not established

mg/kg = milligrams per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbons

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

ENSOLUM

APPENDIX G

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

June 23, 2023

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

RE: Case LS 9m OrderNo.: 2306614

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 17 sample(s) on 6/13/2023 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 **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-1
Project: Case LS 9m
Collection Date: 6/12/2023 10:00:00 AM
Lab ID: 2306614-001 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	65	60		mg/Kg	20	6/14/2023 8:17:29 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/14/2023 10:25:55 AM	75565
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2023 10:25:55 AM	75565
Surr: DNOP	84.3	69-147		%Rec	1	6/14/2023 10:25:55 AM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	19	4.7		mg/Kg	1	6/15/2023 2:45:47 PM	75558
Surr: BFB	152	15-244		%Rec	1	6/15/2023 2:45:47 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.057	0.024		mg/Kg	1	6/15/2023 2:45:47 PM	75558
Toluene	0.59	0.047		mg/Kg	1	6/15/2023 2:45:47 PM	75558
Ethylbenzene	0.13	0.047		mg/Kg	1	6/15/2023 2:45:47 PM	75558
Xylenes, Total	1.7	0.095		mg/Kg	1	6/15/2023 2:45:47 PM	75558
Surr: 4-Bromofluorobenzene	94.5	39.1-146		%Rec	1	6/15/2023 2:45:47 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-2
Project: Case LS 9m
Collection Date: 6/12/2023 10:05:00 AM
Lab ID: 2306614-002 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	81	60		mg/Kg	20	6/14/2023 8:29:48 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	6/14/2023 10:36:27 AM	75565
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	6/14/2023 10:36:27 AM	75565
Surr: DNOP	86.1	69-147		%Rec	1	6/14/2023 10:36:27 AM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	91	4.9		mg/Kg	1	6/15/2023 3:33:23 PM	75558
Surr: BFB	453	15-244	S	%Rec	1	6/15/2023 3:33:23 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.21	0.025		mg/Kg	1	6/15/2023 3:33:23 PM	75558
Toluene	2.2	0.049		mg/Kg	1	6/15/2023 3:33:23 PM	75558
Ethylbenzene	0.53	0.049		mg/Kg	1	6/15/2023 3:33:23 PM	75558
Xylenes, Total	6.7	0.098		mg/Kg	1	6/15/2023 3:33:23 PM	75558
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	6/15/2023 3:33:23 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-3
Project: Case LS 9m
Collection Date: 6/12/2023 10:10:00 AM
Lab ID: 2306614-003 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	70	60		mg/Kg	20	6/14/2023 8:42:10 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	13	9.1		mg/Kg	1	6/14/2023 10:47:03 AM	75565
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	6/14/2023 10:47:03 AM	75565
Surr: DNOP	87.0	69-147		%Rec	1	6/14/2023 10:47:03 AM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	100	4.8		mg/Kg	1	6/15/2023 4:44:58 PM	75558
Surr: BFB	377	15-244	S	%Rec	1	6/15/2023 4:44:58 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.59	0.024		mg/Kg	1	6/15/2023 4:44:58 PM	75558
Toluene	5.7	0.096		mg/Kg	2	6/16/2023 3:46:28 AM	75558
Ethylbenzene	0.97	0.048		mg/Kg	1	6/15/2023 4:44:58 PM	75558
Xylenes, Total	13	0.19		mg/Kg	2	6/16/2023 3:46:28 AM	75558
Surr: 4-Bromofluorobenzene	113	39.1-146		%Rec	1	6/15/2023 4:44:58 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-4
Project: Case LS 9m
Collection Date: 6/12/2023 10:15:00 AM
Lab ID: 2306614-004 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	82	60		mg/Kg	20	6/14/2023 8:54:30 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	12	8.7		mg/Kg	1	6/14/2023 10:57:39 AM	75565
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	6/14/2023 10:57:39 AM	75565
Surr: DNOP	84.7	69-147		%Rec	1	6/14/2023 10:57:39 AM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	120	4.8		mg/Kg	1	6/15/2023 5:08:50 PM	75558
Surr: BFB	670	15-244	S	%Rec	1	6/15/2023 5:08:50 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.16	0.024		mg/Kg	1	6/15/2023 5:08:50 PM	75558
Toluene	1.8	0.048		mg/Kg	1	6/15/2023 5:08:50 PM	75558
Ethylbenzene	0.56	0.048		mg/Kg	1	6/15/2023 5:08:50 PM	75558
Xylenes, Total	6.8	0.097		mg/Kg	1	6/15/2023 5:08:50 PM	75558
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	6/15/2023 5:08:50 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-5
Project: Case LS 9m
Collection Date: 6/12/2023 10:20:00 AM
Lab ID: 2306614-005 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	76	60		mg/Kg	20	6/14/2023 9:06:50 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	6/14/2023 11:08:15 AM	75565
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	6/14/2023 11:08:15 AM	75565
Surr: DNOP	88.9	69-147		%Rec	1	6/14/2023 11:08:15 AM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	150	4.9		mg/Kg	1	6/15/2023 5:32:46 PM	75558
Surr: BFB	558	15-244	S	%Rec	1	6/15/2023 5:32:46 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.63	0.025		mg/Kg	1	6/15/2023 5:32:46 PM	75558
Toluene	5.3	0.098		mg/Kg	2	6/20/2023 6:31:17 AM	75558
Ethylbenzene	1.2	0.049		mg/Kg	1	6/15/2023 5:32:46 PM	75558
Xylenes, Total	13	0.20		mg/Kg	2	6/20/2023 6:31:17 AM	75558
Surr: 4-Bromofluorobenzene	119	39.1-146		%Rec	1	6/15/2023 5:32:46 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-6
Project: Case LS 9m
Collection Date: 6/12/2023 10:25:00 AM
Lab ID: 2306614-006 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	77	60		mg/Kg	20	6/14/2023 9:43:53 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	6/14/2023 11:18:53 AM	75565
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	6/14/2023 11:18:53 AM	75565
Surr: DNOP	95.6	69-147		%Rec	1	6/14/2023 11:18:53 AM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	8.9	4.8		mg/Kg	1	6/15/2023 5:56:39 PM	75558
Surr: BFB	129	15-244		%Rec	1	6/15/2023 5:56:39 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.076	0.024		mg/Kg	1	6/15/2023 5:56:39 PM	75558
Toluene	0.30	0.048		mg/Kg	1	6/15/2023 5:56:39 PM	75558
Ethylbenzene	0.056	0.048		mg/Kg	1	6/15/2023 5:56:39 PM	75558
Xylenes, Total	0.55	0.096		mg/Kg	1	6/15/2023 5:56:39 PM	75558
Surr: 4-Bromofluorobenzene	93.4	39.1-146		%Rec	1	6/15/2023 5:56:39 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-7
Project: Case LS 9m
Collection Date: 6/12/2023 10:30:00 AM
Lab ID: 2306614-007 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	70	60		mg/Kg	20	6/14/2023 9:56:15 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	1500	96		mg/Kg	10	6/15/2023 12:48:26 AM	75565
Motor Oil Range Organics (MRO)	2800	480		mg/Kg	10	6/15/2023 12:48:26 AM	75565
Surr: DNOP	0	69-147	S	%Rec	10	6/15/2023 12:48:26 AM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	800	96		mg/Kg	20	6/15/2023 3:57:16 PM	75558
Surr: BFB	294	15-244	S	%Rec	20	6/15/2023 3:57:16 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.48		mg/Kg	20	6/15/2023 3:57:16 PM	75558
Toluene	10	0.96		mg/Kg	20	6/15/2023 3:57:16 PM	75558
Ethylbenzene	4.8	0.96		mg/Kg	20	6/15/2023 3:57:16 PM	75558
Xylenes, Total	71	1.9		mg/Kg	20	6/15/2023 3:57:16 PM	75558
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	20	6/15/2023 3:57:16 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-8
Project: Case LS 9m
Collection Date: 6/12/2023 10:35:00 AM
Lab ID: 2306614-008 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	67	60		mg/Kg	20	6/14/2023 10:08:36 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	1100	89		mg/Kg	10	6/15/2023 1:30:31 AM	75565
Motor Oil Range Organics (MRO)	2100	440		mg/Kg	10	6/15/2023 1:30:31 AM	75565
Surr: DNOP	0	69-147	S	%Rec	10	6/15/2023 1:30:31 AM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	600	98		mg/Kg	20	6/15/2023 4:21:05 PM	75558
Surr: BFB	239	15-244		%Rec	20	6/15/2023 4:21:05 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.49		mg/Kg	20	6/15/2023 4:21:05 PM	75558
Toluene	8.0	0.98		mg/Kg	20	6/15/2023 4:21:05 PM	75558
Ethylbenzene	3.9	0.98		mg/Kg	20	6/15/2023 4:21:05 PM	75558
Xylenes, Total	57	2.0		mg/Kg	20	6/15/2023 4:21:05 PM	75558
Surr: 4-Bromofluorobenzene	98.6	39.1-146		%Rec	20	6/15/2023 4:21:05 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-9
Project: Case LS 9m
Collection Date: 6/12/2023 10:40:00 AM
Lab ID: 2306614-009 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	77	61		mg/Kg	20	6/14/2023 10:20:56 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	6/14/2023 1:27:47 PM	75565
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/14/2023 1:27:47 PM	75565
Surr: DNOP	149	69-147	S	%Rec	1	6/14/2023 1:27:47 PM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/15/2023 6:20:38 PM	75558
Surr: BFB	117	15-244		%Rec	1	6/15/2023 6:20:38 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.024		mg/Kg	1	6/15/2023 6:20:38 PM	75558
Toluene	ND	0.047		mg/Kg	1	6/15/2023 6:20:38 PM	75558
Ethylbenzene	ND	0.047		mg/Kg	1	6/15/2023 6:20:38 PM	75558
Xylenes, Total	0.25	0.095		mg/Kg	1	6/15/2023 6:20:38 PM	75558
Surr: 4-Bromofluorobenzene	93.9	39.1-146		%Rec	1	6/15/2023 6:20:38 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-10
Project: Case LS 9m
Collection Date: 6/12/2023 10:45:00 AM
Lab ID: 2306614-010 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	78	61		mg/Kg	20	6/14/2023 10:33:18 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/14/2023 1:49:08 PM	75565
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/14/2023 1:49:08 PM	75565
Surr: DNOP	117	69-147		%Rec	1	6/14/2023 1:49:08 PM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/15/2023 6:44:34 PM	75558
Surr: BFB	116	15-244		%Rec	1	6/15/2023 6:44:34 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.024		mg/Kg	1	6/15/2023 6:44:34 PM	75558
Toluene	ND	0.048		mg/Kg	1	6/15/2023 6:44:34 PM	75558
Ethylbenzene	ND	0.048		mg/Kg	1	6/15/2023 6:44:34 PM	75558
Xylenes, Total	0.32	0.096		mg/Kg	1	6/15/2023 6:44:34 PM	75558
Surr: 4-Bromofluorobenzene	91.3	39.1-146		%Rec	1	6/15/2023 6:44:34 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-11
Project: Case LS 9m
Collection Date: 6/12/2023 10:50:00 AM
Lab ID: 2306614-011 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	61	60		mg/Kg	20	6/14/2023 10:45:38 PM	75594
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	6/14/2023 1:59:52 PM	75565
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	6/14/2023 1:59:52 PM	75565
Surr: DNOP	112	69-147		%Rec	1	6/14/2023 1:59:52 PM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/15/2023 7:08:29 PM	75558
Surr: BFB	110	15-244		%Rec	1	6/15/2023 7:08:29 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.024		mg/Kg	1	6/15/2023 7:08:29 PM	75558
Toluene	ND	0.048		mg/Kg	1	6/15/2023 7:08:29 PM	75558
Ethylbenzene	ND	0.048		mg/Kg	1	6/15/2023 7:08:29 PM	75558
Xylenes, Total	ND	0.096		mg/Kg	1	6/15/2023 7:08:29 PM	75558
Surr: 4-Bromofluorobenzene	91.3	39.1-146		%Rec	1	6/15/2023 7:08:29 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-12
Project: Case LS 9m
Collection Date: 6/12/2023 10:55:00 AM
Lab ID: 2306614-012 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	86	60		mg/Kg	20	6/14/2023 10:57:59 PM	75596
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/14/2023 10:46:06 PM	75565
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/14/2023 10:46:06 PM	75565
Surr: DNOP	107	69-147		%Rec	1	6/14/2023 10:46:06 PM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/15/2023 8:20:03 PM	75558
Surr: BFB	105	15-244		%Rec	1	6/15/2023 8:20:03 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.025		mg/Kg	1	6/15/2023 8:20:03 PM	75558
Toluene	0.069	0.049		mg/Kg	1	6/15/2023 8:20:03 PM	75558
Ethylbenzene	ND	0.049		mg/Kg	1	6/15/2023 8:20:03 PM	75558
Xylenes, Total	0.15	0.099		mg/Kg	1	6/15/2023 8:20:03 PM	75558
Surr: 4-Bromofluorobenzene	89.2	39.1-146		%Rec	1	6/15/2023 8:20:03 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-13
Project: Case LS 9m
Collection Date: 6/12/2023 11:00:00 AM
Lab ID: 2306614-013 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	130	60		mg/Kg	20	6/14/2023 11:35:01 PM	75596
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/14/2023 10:57:15 PM	75565
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/14/2023 10:57:15 PM	75565
Surr: DNOP	101	69-147		%Rec	1	6/14/2023 10:57:15 PM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/15/2023 8:43:49 PM	75558
Surr: BFB	107	15-244		%Rec	1	6/15/2023 8:43:49 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.024		mg/Kg	1	6/15/2023 8:43:49 PM	75558
Toluene	ND	0.048		mg/Kg	1	6/15/2023 8:43:49 PM	75558
Ethylbenzene	ND	0.048		mg/Kg	1	6/15/2023 8:43:49 PM	75558
Xylenes, Total	0.10	0.097		mg/Kg	1	6/15/2023 8:43:49 PM	75558
Surr: 4-Bromofluorobenzene	89.9	39.1-146		%Rec	1	6/15/2023 8:43:49 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-14
Project: Case LS 9m
Collection Date: 6/12/2023 11:05:00 AM
Lab ID: 2306614-014 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	79	59		mg/Kg	20	6/15/2023 12:36:44 AM	75596
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/14/2023 11:08:26 PM	75565
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2023 11:08:26 PM	75565
Surr: DNOP	199	69-147	S	%Rec	1	6/14/2023 11:08:26 PM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/20/2023 10:44:55 AM	75558
Surr: BFB	97.1	15-244		%Rec	1	6/20/2023 10:44:55 AM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.025		mg/Kg	1	6/20/2023 10:44:55 AM	75558
Toluene	ND	0.049		mg/Kg	1	6/20/2023 10:44:55 AM	75558
Ethylbenzene	ND	0.049		mg/Kg	1	6/20/2023 10:44:55 AM	75558
Xylenes, Total	ND	0.099		mg/Kg	1	6/20/2023 10:44:55 AM	75558
Surr: 4-Bromofluorobenzene	83.5	39.1-146		%Rec	1	6/20/2023 10:44:55 AM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-15
Project: Case LS 9m
Collection Date: 6/12/2023 11:10:00 AM
Lab ID: 2306614-015 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	140	60		mg/Kg	20	6/15/2023 12:49:04 AM	75596
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	6/14/2023 11:19:40 PM	75565
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	6/14/2023 11:19:40 PM	75565
Surr: DNOP	104	69-147		%Rec	1	6/14/2023 11:19:40 PM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/15/2023 9:31:11 PM	75558
Surr: BFB	105	15-244		%Rec	1	6/15/2023 9:31:11 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.024		mg/Kg	1	6/15/2023 9:31:11 PM	75558
Toluene	ND	0.048		mg/Kg	1	6/15/2023 9:31:11 PM	75558
Ethylbenzene	ND	0.048		mg/Kg	1	6/15/2023 9:31:11 PM	75558
Xylenes, Total	ND	0.097		mg/Kg	1	6/15/2023 9:31:11 PM	75558
Surr: 4-Bromofluorobenzene	89.8	39.1-146		%Rec	1	6/15/2023 9:31:11 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-16
Project: Case LS 9m
Collection Date: 6/12/2023 11:15:00 AM
Lab ID: 2306614-016 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	160	60		mg/Kg	20	6/15/2023 1:01:24 AM	75596
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/14/2023 11:30:51 PM	75565
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/14/2023 11:30:51 PM	75565
Surr: DNOP	125	69-147		%Rec	1	6/14/2023 11:30:51 PM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/15/2023 9:54:45 PM	75558
Surr: BFB	102	15-244		%Rec	1	6/15/2023 9:54:45 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.024		mg/Kg	1	6/15/2023 9:54:45 PM	75558
Toluene	ND	0.048		mg/Kg	1	6/15/2023 9:54:45 PM	75558
Ethylbenzene	ND	0.048		mg/Kg	1	6/15/2023 9:54:45 PM	75558
Xylenes, Total	ND	0.097		mg/Kg	1	6/15/2023 9:54:45 PM	75558
Surr: 4-Bromofluorobenzene	88.1	39.1-146		%Rec	1	6/15/2023 9:54:45 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306614**
Date Reported: **6/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-17
Project: Case LS 9m
Collection Date: 6/12/2023 11:20:00 AM
Lab ID: 2306614-017 **Matrix:** SOIL **Received Date:** 6/13/2023 6:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	160	60		mg/Kg	20	6/15/2023 1:13:45 AM	75596
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**	
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	6/14/2023 11:42:06 PM	75565
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	6/14/2023 11:42:06 PM	75565
Surr: DNOP	103	69-147		%Rec	1	6/14/2023 11:42:06 PM	75565
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/15/2023 10:18:18 PM	75558
Surr: BFB	103	15-244		%Rec	1	6/15/2023 10:18:18 PM	75558
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.024		mg/Kg	1	6/15/2023 10:18:18 PM	75558
Toluene	ND	0.048		mg/Kg	1	6/15/2023 10:18:18 PM	75558
Ethylbenzene	ND	0.048		mg/Kg	1	6/15/2023 10:18:18 PM	75558
Xylenes, Total	0.10	0.096		mg/Kg	1	6/15/2023 10:18:18 PM	75558
Surr: 4-Bromofluorobenzene	87.9	39.1-146		%Rec	1	6/15/2023 10:18:18 PM	75558

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306614**

23-Jun-23

Client: ENSOLUM

Project: Case LS 9m

Sample ID: **MB-75594**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **75594**	RunNo: **97431**
Prep Date: **6/14/2023**	Analysis Date: **6/14/2023**	SeqNo: **3541454** Units: **mg/Kg**

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

Sample ID: **LCS-75594**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **75594**	RunNo: **97431**
Prep Date: **6/14/2023**	Analysis Date: **6/14/2023**	SeqNo: **3541455** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Sample ID: **MB-75596**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **75596**	RunNo: **97431**
Prep Date: **6/14/2023**	Analysis Date: **6/14/2023**	SeqNo: **3541458** Units: **mg/Kg**

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

Sample ID: **LCS-75596**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **75596**	RunNo: **97431**
Prep Date: **6/14/2023**	Analysis Date: **6/14/2023**	SeqNo: **3541459** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	90	110			

Qualifiers:

*	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306614**

23-Jun-23

Client: ENSOLUM

Project: Case LS 9m

Sample ID: **LCS-75565** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **75565** RunNo: **97423**

Prep Date: **6/13/2023** Analysis Date: **6/14/2023** SeqNo: **3539513** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.8	61.9	130			
Surr: DNOP	5.1		5.000		102	69	147			

Sample ID: **MB-75565** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **75565** RunNo: **97423**

Prep Date: **6/13/2023** Analysis Date: **6/14/2023** SeqNo: **3539514** 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	69	147			

Sample ID: **2306614-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-1** Batch ID: **75565** RunNo: **97423**

Prep Date: **6/13/2023** Analysis Date: **6/15/2023** SeqNo: **3540627** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	28	9.5	47.44	0	59.0	54.2	135			
Surr: DNOP	3.9		4.744		83.1	69	147			

Sample ID: **2306614-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-1** Batch ID: **75565** RunNo: **97423**

Prep Date: **6/13/2023** Analysis Date: **6/15/2023** SeqNo: **3540628** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	31	8.9	44.72	0	70.1	54.2	135	11.2	29.2	
Surr: DNOP	4.2		4.472		93.4	69	147	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306614**

23-Jun-23

Client: ENSOLUM

Project: Case LS 9m

Sample ID: **lcs-75558**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **75558**	RunNo: **97434**
Prep Date: **6/13/2023**	Analysis Date: **6/14/2023**	SeqNo: **3539941** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.1	70	130			
Surr: BFB	2000		1000		201	15	244			

Sample ID: **mb-75558**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **75558**	RunNo: **97434**
Prep Date: **6/13/2023**	Analysis Date: **6/14/2023**	SeqNo: **3539942** 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	980		1000		97.7	15	244			

Sample ID: **2306614-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-1**	Batch ID: **75558**	RunNo: **97464**
Prep Date: **6/13/2023**	Analysis Date: **6/16/2023**	SeqNo: **3542762** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.8	23.76	18.62	46.4	70	130			S
Surr: BFB	2100		950.6		224	15	244			

Sample ID: **2306614-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-1**	Batch ID: **75558**	RunNo: **97464**
Prep Date: **6/13/2023**	Analysis Date: **6/16/2023**	SeqNo: **3542763** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.7	23.67	18.62	29.4	70	130	14.7	20	S
Surr: BFB	2100		947.0		219	15	244	0	0	

Sample ID: **lcs-75635**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **75635**	RunNo: **97550**
Prep Date: **6/15/2023**	Analysis Date: **6/19/2023**	SeqNo: **3545635** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2100		1000		210	15	244			

Sample ID: **mb-75635**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **75635**	RunNo: **97550**
Prep Date: **6/15/2023**	Analysis Date: **6/19/2023**	SeqNo: **3545636** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		103	15	244			

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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306614**

23-Jun-23

Client: ENSOLUM

Project: Case LS 9m

Sample ID: **lcs-75662**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **75662**	RunNo: **97550**
Prep Date: **6/16/2023**	Analysis Date: **6/19/2023**	SeqNo: **3546076** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		203	15	244			

Sample ID: **mb-75662**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **75662**	RunNo: **97550**
Prep Date: **6/16/2023**	Analysis Date: **6/20/2023**	SeqNo: **3546077** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	15	244			

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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306614**

23-Jun-23

Client: ENSOLUM

Project: Case LS 9m

Sample ID: **LCS-75558** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **75558** RunNo: **97434**

Prep Date: **6/13/2023** Analysis Date: **6/14/2023** SeqNo: **3539945** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.51	0.025	0.5000	0	102	70	130			
Toluene	0.54	0.050	0.5000	0	109	70	130			
Ethylbenzene	0.55	0.050	0.5000	0	109	70	130			
Xylenes, Total	1.7	0.10	1.500	0	112	70	130			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.3	39.1	146			

Sample ID: **mb-75558** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **75558** RunNo: **97434**

Prep Date: **6/13/2023** Analysis Date: **6/14/2023** SeqNo: **3539946** 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	0.87		1.000		86.7	39.1	146			

Sample ID: **2306614-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-2** Batch ID: **75558** RunNo: **97464**

Prep Date: **6/13/2023** Analysis Date: **6/16/2023** SeqNo: **3542808** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	0.9843	0.2109	74.4	70	130			
Toluene	2.3	0.049	0.9843	2.225	8.61	70	130			S
Ethylbenzene	1.2	0.049	0.9843	0.5338	66.6	70	130			S
Xylenes, Total	6.9	0.098	2.953	6.713	4.89	70	130			S
Surr: 4-Bromofluorobenzene	0.97		0.9843		98.6	39.1	146			

Sample ID: **2306614-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-2** Batch ID: **75558** RunNo: **97464**

Prep Date: **6/13/2023** Analysis Date: **6/16/2023** SeqNo: **3542809** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9872	0.2109	81.0	70	130	6.87	20	
Toluene	2.2	0.049	0.9872	2.225	-7.09	70	130	6.93	20	S
Ethylbenzene	1.2	0.049	0.9872	0.5338	67.4	70	130	0.857	20	S
Xylenes, Total	6.3	0.099	2.962	6.713	-14.9	70	130	8.93	20	S
Surr: 4-Bromofluorobenzene	0.99		0.9872		100	39.1	146	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306614**

23-Jun-23

Client: ENSOLUM

Project: Case LS 9m

Sample ID: **LCS-75635**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **75635**	RunNo: **97550**
Prep Date: **6/15/2023**	Analysis Date: **6/19/2023**	SeqNo: **3545642** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.88		1.000		88.5	39.1	146			

Sample ID: **mb-75635**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **75635**	RunNo: **97550**
Prep Date: **6/15/2023**	Analysis Date: **6/19/2023**	SeqNo: **3545643** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.88		1.000		87.6	39.1	146			

Sample ID: **LCS-75662**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **75662**	RunNo: **97550**
Prep Date: **6/16/2023**	Analysis Date: **6/20/2023**	SeqNo: **3546176** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.88		1.000		88.1	39.1	146			

Sample ID: **mb-75662**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **75662**	RunNo: **97550**
Prep Date: **6/16/2023**	Analysis Date: **6/20/2023**	SeqNo: **3546177** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.85		1.000		85.3	39.1	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
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 Work Order Number: 2306614 RcptNo: 1

Received By: Tracy Casarrubias 6/13/2023 6:15:00 AM

Completed By: Tracy Casarrubias 6/13/2023 6:51:06 AM

Reviewed By: JM 6/13/23

Chain of Custody

1. Is Chain of Custody 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: SCM 06/13/23

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.1	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Ensolum, LLC.

Mailing Address: 606 S Rio Grande Suit A

Phone #: 970 216 5235

email or Fax#: cdaponti@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: ~~Standard~~ 15
☐ Standard ☒ Rush 6-06-23

Project Name: Case LS #9M

Project #:

Project Manager: K Summers

Sampler: C D Aponti

On Ice: ☒ Yes ☐ No 4093

# of Coolers: 1

Cooler Temp(Including CF): 5.1-0=5.1 (°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. 2306616	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~~, ~~NO3~~, ~~NO2~~, ~~PO4~~, ~~SO4~~	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/12	1000	S	S-1	1 4oz Jar	Cool	001	✓	✓					✓			
6/12	1005	S	S-2		Cool	002	✓	✓					✓			
6/12	1010	S	S-3		Cool	003	✓	✓					✓			
6/12	1015	S	S-4		Cool	004	✓	✓					✓			
6/12	1020	S	S-5		Cool	005	✓	✓					✓			
6/12	1025	S	S-6		Cool	006	✓	✓					✓			
6/12	1030	S	S-7		Cool	007	✓	✓					✓			
6/12	1035	S	S-8		Cool	008	✓	✓					✓			
6/12	1040	S	S-9		Cool	009	✓	✓					✓			
6/12	1045	S	S-10		Cool	010	✓	✓					✓			
6/12	1050	S	S-11		Cool	011	✓	✓					✓			
6/12	1055	S	S-12		Cool	012	✓	✓					✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/12/23	1252				6/12/23	1252
6/12/23	1754			courier	6/13/23	6:15

Remarks: Tom Long

1 of 2

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.

Chain-of-Custody Record

Client: Ensolum, LLC.

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: ~~Standard~~ 15

☐ Standard ☑ Rush 6-15-23

Project Name: Case LS #9m

Project #:

Project Manager:

Sampler:

On Ice: ☒ Yes ☐ No 4°C

# of Coolers: 1

Cooler Temp(Including CF): 5.1-0=5.1 (°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. 2306614	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~~, ~~NO3~~, ~~NO2~~, ~~PO4~~, ~~SO4~~	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/12	1100	S	S-13	1 4oz Jar	Cool	013	✓	✓					✓			
6/12	1105	S	S-14		Cool	014	✓	✓					✓			
6/12	1110	S	S-15		Cool	015	✓	✓					✓			
6/12	1015	S	S-16		Cool	016	✓	✓					✓			
6/12	1020	S	S-17		Cool	~~018~~ 017	✓	✓					✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6/12/23	1252				6/12/23	1252
6/12/23	1754			Courier	6/13/23	6:15

Remarks: Tom Long

2 of 2

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

June 22, 2023

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

RE: Case LS 9M OrderNo.: 2306946

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/17/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2306946**
Date Reported: **6/22/2023**

CLIENT: ENSOLUM
Client Sample ID: S-3a
Project: Case LS 9M
Collection Date: 6/16/2023 11:00:00 AM
Lab ID: 2306946-001
Matrix: MEOH (SOIL)
Received Date: 6/17/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	ND	60		mg/Kg	20	6/19/2023 11:17:59 AM	75693
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	14	9.4		mg/Kg	1	6/19/2023 12:19:01 PM	75692
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/19/2023 12:19:01 PM	75692
Surr: DNOP	90.8	69-147		%Rec	1	6/19/2023 12:19:01 PM	75692
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	6/18/2023 5:34:26 PM	GS97534
Surr: BFB	108	15-244		%Rec	5	6/18/2023 5:34:26 PM	GS97534
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.094		mg/Kg	5	6/18/2023 5:34:26 PM	R97534
Toluene	ND	0.19		mg/Kg	5	6/18/2023 5:34:26 PM	R97534
Ethylbenzene	ND	0.19		mg/Kg	5	6/18/2023 5:34:26 PM	R97534
Xylenes, Total	ND	0.38		mg/Kg	5	6/18/2023 5:34:26 PM	R97534
Surr: 4-Bromofluorobenzene	88.7	39.1-146		%Rec	5	6/18/2023 5:34:26 PM	R97534

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306946**
Date Reported: **6/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-4a
Project: Case LS 9M **Collection Date:** 6/16/2023 11:05:00 AM
Lab ID: 2306946-002 **Matrix:** MEOH (SOIL) **Received Date:** 6/17/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	ND	60		mg/Kg	20	6/19/2023 11:30:23 AM	75693
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	10	9.9		mg/Kg	1	6/19/2023 12:29:51 PM	75692
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/19/2023 12:29:51 PM	75692
Surr: DNOP	87.4	69-147		%Rec	1	6/19/2023 12:29:51 PM	75692
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	6/18/2023 6:46:39 PM	GS97534
Surr: BFB	109	15-244		%Rec	1	6/18/2023 6:46:39 PM	GS97534
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.019		mg/Kg	1	6/18/2023 6:46:39 PM	R97534
Toluene	ND	0.038		mg/Kg	1	6/18/2023 6:46:39 PM	R97534
Ethylbenzene	ND	0.038		mg/Kg	1	6/18/2023 6:46:39 PM	R97534
Xylenes, Total	ND	0.077		mg/Kg	1	6/18/2023 6:46:39 PM	R97534
Surr: 4-Bromofluorobenzene	89.9	39.1-146		%Rec	1	6/18/2023 6:46:39 PM	R97534

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306946**
Date Reported: **6/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-5a
Project: Case LS 9M **Collection Date:** 6/16/2023 11:10:00 AM
Lab ID: 2306946-003 **Matrix:** MEOH (SOIL) **Received Date:** 6/17/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	ND	60		mg/Kg	20	6/19/2023 11:42:47 AM	75693
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/19/2023 12:40:39 PM	75692
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/19/2023 12:40:39 PM	75692
Surr: DNOP	93.5	69-147		%Rec	1	6/19/2023 12:40:39 PM	75692
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	6/18/2023 7:10:39 PM	GS97534
Surr: BFB	111	15-244		%Rec	1	6/18/2023 7:10:39 PM	GS97534
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.018		mg/Kg	1	6/18/2023 7:10:39 PM	R97534
Toluene	ND	0.036		mg/Kg	1	6/18/2023 7:10:39 PM	R97534
Ethylbenzene	ND	0.036		mg/Kg	1	6/18/2023 7:10:39 PM	R97534
Xylenes, Total	ND	0.071		mg/Kg	1	6/18/2023 7:10:39 PM	R97534
Surr: 4-Bromofluorobenzene	92.3	39.1-146		%Rec	1	6/18/2023 7:10:39 PM	R97534

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306946**
Date Reported: **6/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-7a
Project: Case LS 9M **Collection Date:** 6/16/2023 11:15:00 AM
Lab ID: 2306946-004 **Matrix:** MEOH (SOIL) **Received Date:** 6/17/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	ND	60		mg/Kg	20	6/19/2023 11:55:11 AM	75693
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	11	9.9		mg/Kg	1	6/19/2023 12:51:31 PM	75692
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/19/2023 12:51:31 PM	75692
Surr: DNOP	94.0	69-147		%Rec	1	6/19/2023 12:51:31 PM	75692
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	6/18/2023 5:58:32 PM	GS97534
Surr: BFB	109	15-244		%Rec	5	6/18/2023 5:58:32 PM	GS97534
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.098		mg/Kg	5	6/18/2023 5:58:32 PM	R97534
Toluene	ND	0.20		mg/Kg	5	6/18/2023 5:58:32 PM	R97534
Ethylbenzene	ND	0.20		mg/Kg	5	6/18/2023 5:58:32 PM	R97534
Xylenes, Total	ND	0.39		mg/Kg	5	6/18/2023 5:58:32 PM	R97534
Surr: 4-Bromofluorobenzene	89.3	39.1-146		%Rec	5	6/18/2023 5:58:32 PM	R97534

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2306946**
Date Reported: **6/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-8a
Project: Case LS 9M **Collection Date:** 6/16/2023 11:20:00 AM
Lab ID: 2306946-005 **Matrix:** MEOH (SOIL) **Received Date:** 6/17/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SNS**	
Chloride	ND	60		mg/Kg	20	6/19/2023 12:07:36 PM	75693
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/19/2023 1:02:19 PM	75692
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/19/2023 1:02:19 PM	75692
Surr: DNOP	95.9	69-147		%Rec	1	6/19/2023 1:02:19 PM	75692
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	6/18/2023 7:34:45 PM	GS97534
Surr: BFB	107	15-244		%Rec	1	6/18/2023 7:34:45 PM	GS97534
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.022		mg/Kg	1	6/18/2023 7:34:45 PM	R97534
Toluene	ND	0.043		mg/Kg	1	6/18/2023 7:34:45 PM	R97534
Ethylbenzene	ND	0.043		mg/Kg	1	6/18/2023 7:34:45 PM	R97534
Xylenes, Total	ND	0.087		mg/Kg	1	6/18/2023 7:34:45 PM	R97534
Surr: 4-Bromofluorobenzene	89.9	39.1-146		%Rec	1	6/18/2023 7:34:45 PM	R97534

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	Above Quantitation Range/Estimated Value
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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306946**

22-Jun-23

Client: ENSOLUM

Project: Case LS 9M

Sample ID: **MB-75693**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **75693**	RunNo: **97545**
Prep Date: **6/19/2023**	Analysis Date: **6/19/2023**	SeqNo: **3547028** Units: **mg/Kg**

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

Sample ID: **LCS-75693**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **75693**	RunNo: **97545**
Prep Date: **6/19/2023**	Analysis Date: **6/19/2023**	SeqNo: **3547029** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.1	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306946**

22-Jun-23

Client: ENSOLUM

Project: Case LS 9M

Sample ID: **LCS-75621**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **75621**	RunNo: **97548**
Prep Date: **6/16/2023**	Analysis Date: **6/19/2023**	SeqNo: **3547375** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		92.7	69	147			

Sample ID: **LCS-75692**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **75692**	RunNo: **97548**
Prep Date: **6/19/2023**	Analysis Date: **6/19/2023**	SeqNo: **3547376** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	50.00	0	76.0	61.9	130			
Surr: DNOP	4.3		5.000		86.2	69	147			

Sample ID: **MB-75621**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **75621**	RunNo: **97548**
Prep Date: **6/16/2023**	Analysis Date: **6/19/2023**	SeqNo: **3547377** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		92.7	69	147			

Sample ID: **MB-75692**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **75692**	RunNo: **97548**
Prep Date: **6/19/2023**	Analysis Date: **6/19/2023**	SeqNo: **3547378** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.4		10.00		93.6	69	147			

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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306946**

22-Jun-23

Client: ENSOLUM

Project: Case LS 9M

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R97534**	RunNo: **97534**
Prep Date:	Analysis Date: **6/18/2023**	SeqNo: **3544468** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2200		1000		216	15	244			

Sample ID: **lcs-75595**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **75595**	RunNo: **97534**
Prep Date: **6/14/2023**	Analysis Date: **6/18/2023**	SeqNo: **3544469** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		203	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS97534**	RunNo: **97534**
Prep Date:	Analysis Date: **6/18/2023**	SeqNo: **3544470** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		107	15	244			

Sample ID: **mb-75595**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **75595**	RunNo: **97534**
Prep Date: **6/14/2023**	Analysis Date: **6/18/2023**	SeqNo: **3544471** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	15	244			

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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306946**

22-Jun-23

Client: ENSOLUM

Project: Case LS 9M

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R97534**	RunNo: **97534**
Prep Date:	Analysis Date: **6/18/2023**	SeqNo: **3544607** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.025	1.000	0	78.7	70	130			
Toluene	0.80	0.050	1.000	0	80.3	70	130			
Ethylbenzene	0.80	0.050	1.000	0	80.3	70	130			
Xylenes, Total	2.4	0.10	3.000	0	81.3	70	130			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.2	39.1	146			

Sample ID: **LCS-75595**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **75595**	RunNo: **97534**
Prep Date: **6/14/2023**	Analysis Date: **6/18/2023**	SeqNo: **3544608** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		1.000		89.1	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R97534**	RunNo: **97534**
Prep Date:	Analysis Date: **6/18/2023**	SeqNo: **3544609** 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	0.89		1.000		89.0	39.1	146			

Sample ID: **mb-75595**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **75595**	RunNo: **97534**
Prep Date: **6/14/2023**	Analysis Date: **6/18/2023**	SeqNo: **3544610** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.87		1.000		86.7	39.1	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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
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 Work Order Number: 2306946 RcptNo: 1

Received By: Tracy Casarrubias 6/17/2023 7:50:00 AM

Completed By: Tracy Casarrubias 6/17/2023 10:06:23 AM

Reviewed By: TMC 6/19/23

Chain of Custody

1. Is Chain of Custody 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: TMC 6/17/23

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: Phone number and Email/ Fax missing on COC- TMC 6/17/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.5	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Ensolum, LLC.

Mailing Address: 606 S Rio Grande Suite A 87410

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 100% ☐ Standard ☒ Rush 6-19-23

Project Name: Case LS #9m

Project #:

Project Manager: K Summers

Sampler: CDAponti

On Ice: ☑ Yes ☐ No Yogi

# of Coolers: 1

Cooler Temp(Including CF): 2.6-0.1=2.5 (°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. 2306946	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)
6/16	1100	S	S-3a	1 4oz Jar	Cool	001	✓	✓					✓			
6/16	1105	S	S-4a		Cool	002	✓	✓					✓			
6/16	1110	S	S-5a		Cool	003	✓	✓					✓			
6/16	1115	S	S-7a		Cool	004	✓	✓					✓			
6/16	1120	S	S-8a		Cool	005	✓	✓					✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/16/23	1614				6/16/23	1614
6/14/23	1806			Courier	6/17/23	7:50

Remarks: Tom Long

Same Day

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.

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

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

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 257597
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	12/7/2023