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)* **nAPP2304533224**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.622994** Longitude **-107.728619** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Schwerdtsferger LS #10A**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **02/03/2023**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
D	**31**	**28N**	**8W**	**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): **0.146 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release On February 7, 2023, Enterprise had a release of natural gas and natural gas liquids from the Schwerdtsferger LS #10A pipeline. The pipeline was isolated, depressurized, locked and tagged out. No fire nor injuries occurred. No waterways were affected. Enterprise began repairs and remediation on February 14, 2023 and determine the release reportable per NMOCD regulation due the volume of impacted subsurface soil. Remediation and repairs were completed on February 23, 2023. The final excavation dimensions measured approximately 25 feet long by 15 feet wide by 21 feet deep. A total of 632 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.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Thomas Long Title: Senior Environmental Scientist

Signature: Thomas Long Date: 05-22-2023

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: 05/23/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

CLOSURE REPORT

Property:

Schwerdtsferger LS #10A (02/14/23)
Unit Letter D, S31 T28N R8W
San Juan County, New Mexico

New Mexico EMNRD OCD Incident ID No. NAPP2304533224

May 12, 2023

Ensolum Project No. 05A1226228

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:	Schwerdtsferger LS #10A (02/14/23) (Site)
NM EMNRD OCD Incident ID No.	NAPP2304533224
Location:	36.622994° North, 107.728619° West Unit Letter D, Section 31, Township 28 North, Range 8 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 February 7, 2023, Enterprise discovered a release on the Schwerdtsferger LS #10A pipeline. Enterprise personnel subsequently isolated and locked the pipeline out of service. On February 9, 2023, Enterprise initiated activities to repair the pipeline and remediate potential petroleum hydrocarbon impact. On February 14, 2023, 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 19.15.29 New Mexico Administrative Code (NMAC), 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 or in the adjacent PLSS sections (**Figure A**, **Appendix B**).

- Two cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in adjacent PLSS sections. No CPWs were identified in the same PLSS section as the Site. The CPWs are depicted on **Figure B** (**Appendix B**). Documentation for the cathodic

protection well located near the Phillips #2, #3, and #1A well locations indicates a depth to water between 160 feet to 180 feet below grade surface (bgs). This cathodic protection well is located approximately 1 mile southeast of the Site and is 840 feet lower in elevation than the Site. Documentation for the cathodic protection well located near the Phillips #4, #3E, and #800 well locations indicates dampness at approximately 100 feet bgs. This cathodic protection well is located approximately 1.3 miles southeast of the Site and is 499 feet lower 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**).
- 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 February 9, 2023, Enterprise initiated activities to repair the pipeline and remediate petroleum hydrocarbon impact resulting from the release. During the remediation and corrective action activities, Sunland Construction, Inc, provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 25 feet long and 15 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 21 feet bgs. The lithology encountered during the completion of remediation activities consisted primarily of silty sand.

Approximately 632 cubic yards (yd^3) of petroleum hydrocarbon-affected soils 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 13 composite soil samples (TS-1 and S-1 through S-12) from the excavation for laboratory analysis. The composite samples were comprised of five aliquots each and represent an estimated 200 square foot (ft^2) sample area or less per guidelines outlined in Section D of 19.15.29.12 NMAC. The excavator bucket was utilized to obtain fresh aliquots from each area of the excavation. Regulatory correspondence is provided in **Appendix E**.

First Sampling Event

On February 16, 2023, sampling was performed at the Site. Composite soil sample TS-1 (8') was collected from the floor of the excavation to evaluate the concentrations of hydrocarbons at the Site. Subsequent soil analytical results identified benzene, total BTEX, and TPH concentrations that exceeded the NM EMNRD OCD closure criteria for the composite soil sample.

Second Sampling Event

In response to the exceedances of composite sample TS-1 during the first sampling event, the excavation was extended. The impacted soils were removed by excavation and transported to the landfarm for disposal/remediation. On February 23, 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-1 (21') and S-2 (21') were collected from the floor of the excavation. Composite soil samples S-3 (0' to 21'), S-4 (0' to 21'), S-5 (0' to 21'), S-6 (0' to 21'), S-7 (0' to 21'), S-8 (0' to 21'), S-9 (0' to 21'), S-10 (0' to 21'), S-11 (0' to 21'), and S-12 (0' to 21') 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 through S-12) to the applicable NM EMNRD OCD closure criteria. The soil associated with composite soil sample TS-1 was removed from the Site, and therefore, the results for TS-1 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-6, S-10, and S-11 indicate benzene concentrations ranging from 0.018 mg/kg (S-1) to 0.020 mg/kg (S-10 and S-11), which are less than the New Mexico EMNRD OCD closure criteria of 10 mg/kg. The laboratory analytical results for all other composite soil samples collected from soils remaining at the Site indicate benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 10 mg/kg.

- The laboratory analytical results for all composite soil samples collected from soils remaining at the Site indicate combined BTEX concentrations ranging from 0.16 mg/kg (S-3) to 0.61 mg/kg (S-10), which are less than the New Mexico EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for all composite soil samples collected from soils remaining at the Site indicate combined TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for all composite soil samples collected from soils remaining at the Site indicate chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico 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. Enterprise will re-seed the Site with an approved seeding mixture.

8.0 FINDINGS AND RECOMMENDATION

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

- Approximately 632 yd^3 of petroleum hydrocarbon-affected soil cuttings 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.

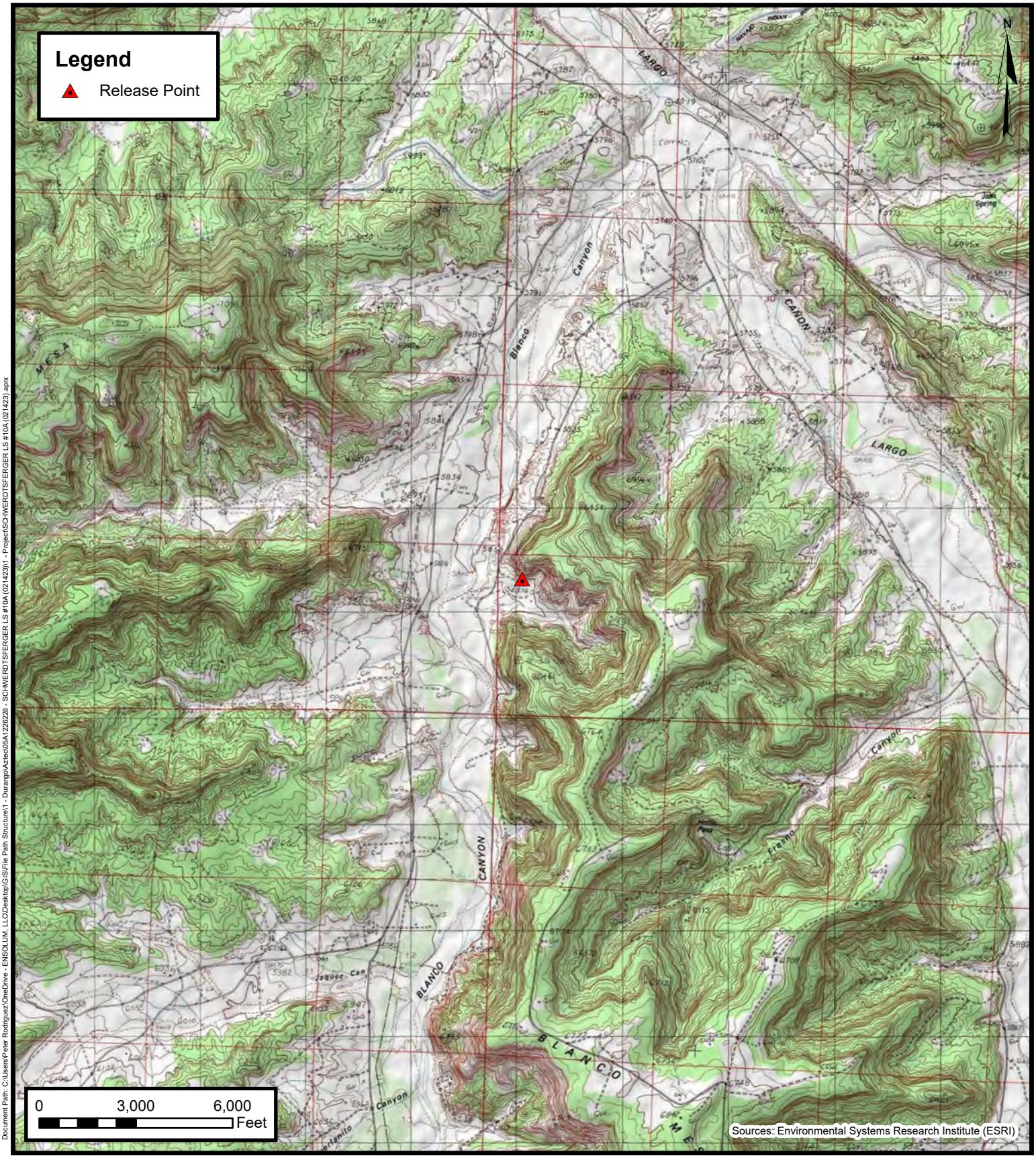
9.3 Reliance

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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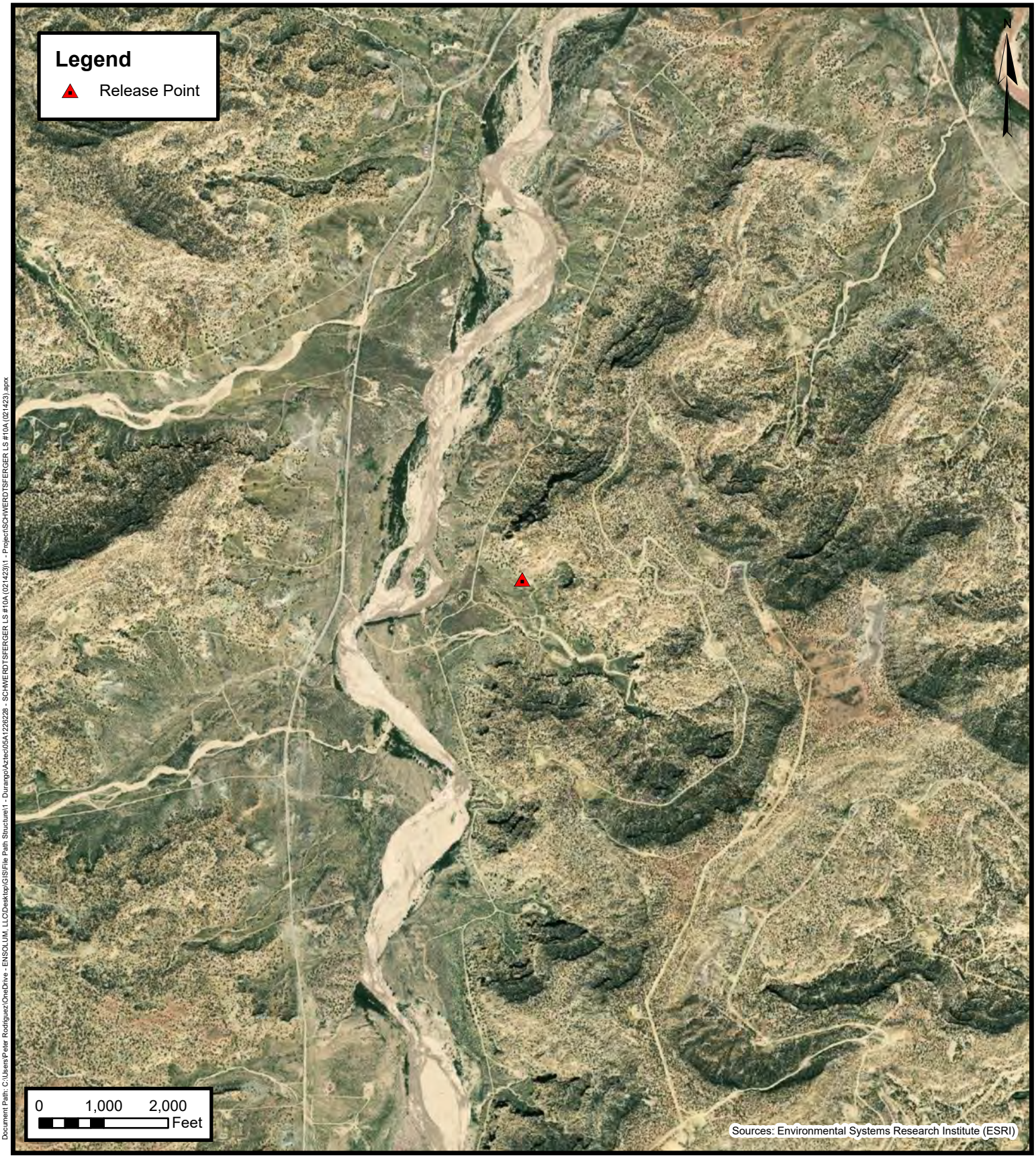
Environmental, Engineering and Hydrogeologic Consultants

Topographic Map

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE
1



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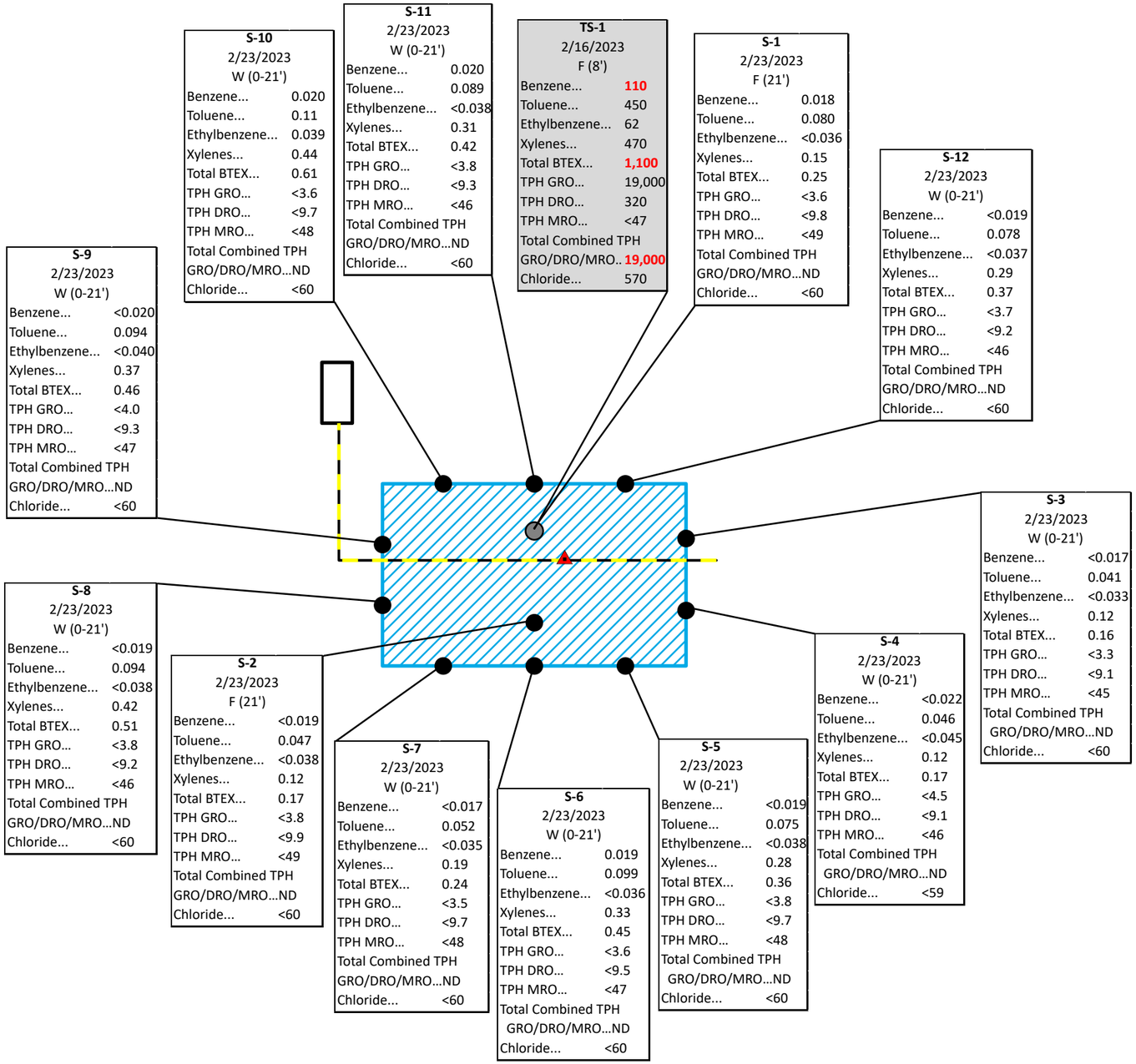
Site Vicinity Map

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE
2



Legend

- Release Point
- Composite Sample Location
- Composite Soil Sample Removed by Excavation
- Pipeline
- Meter
- Current Excavation

Notes:
F - Floor Sample
W - Wall Sample
All concentration are
listed in milligrams per kilogram (mg/kg)
Concentrations in red exceed the
Applicable NM EMNRD OCD Closure Criteria.
Analytical callouts in gray denote sampling
location removed by excavation.
All depths are listed in feet BGS.

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SITE MAP WITH SOIL ANALYTICAL RESULTS

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)

Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE
3

Project Number: 05A1226228

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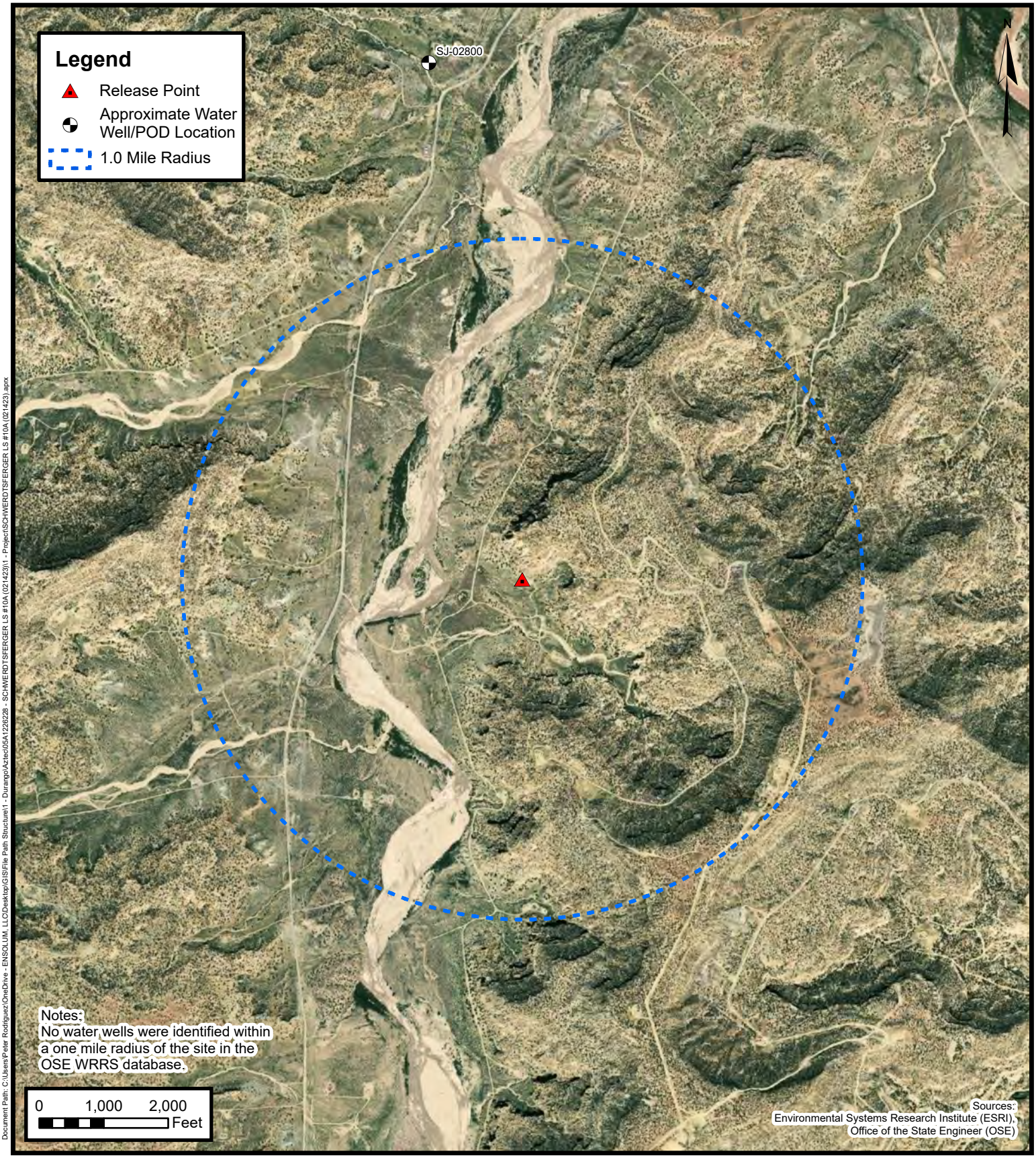
APPENDIX B

Siting Figures and Documentation



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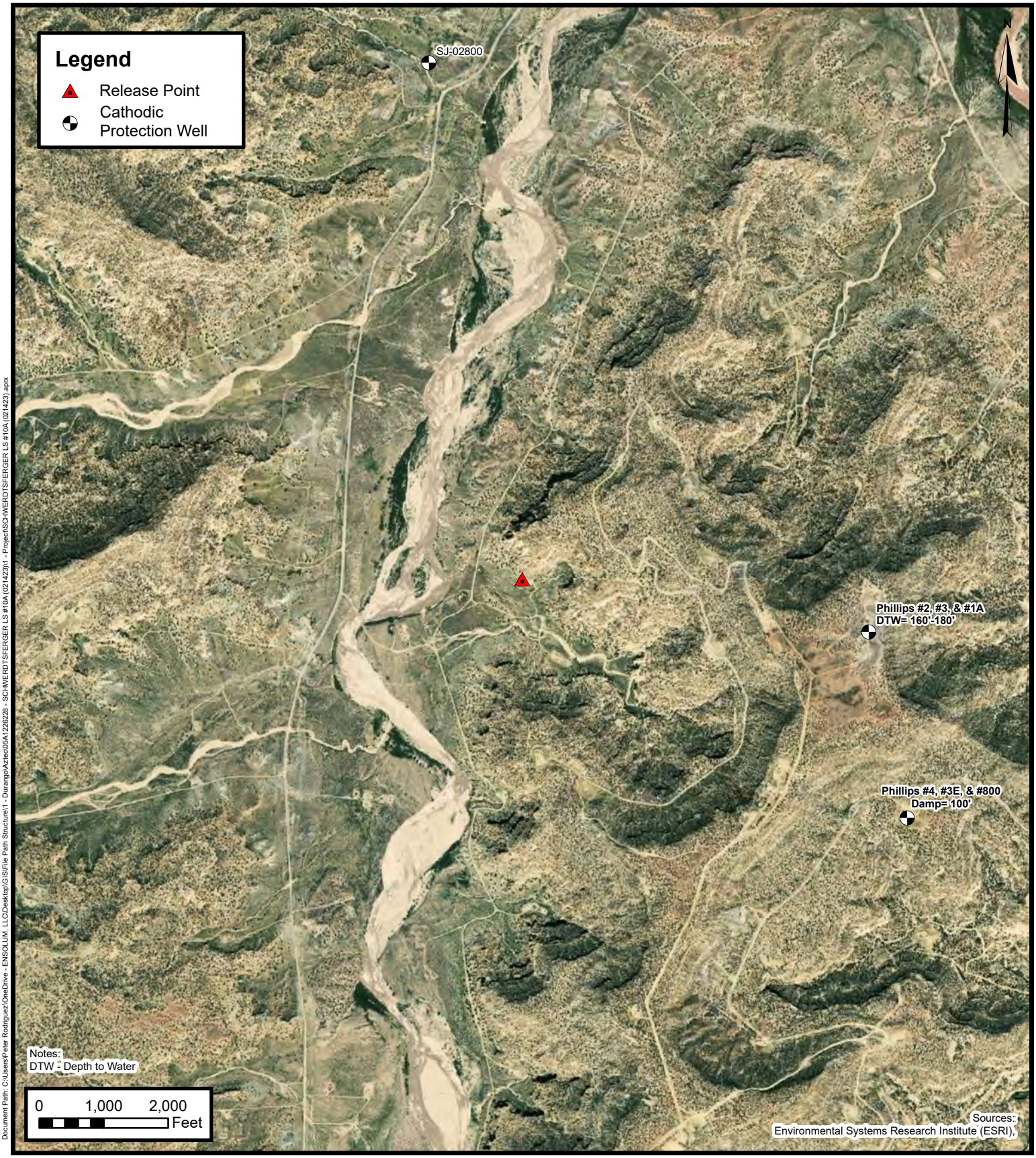
1.0 Mile Radius Water Well/ Pod Location Map

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE
A



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Cathodic Protection Well Recorded Depth to Water

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE

B

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300 Foot Radius Watercourse and Drainage Identification

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE

C

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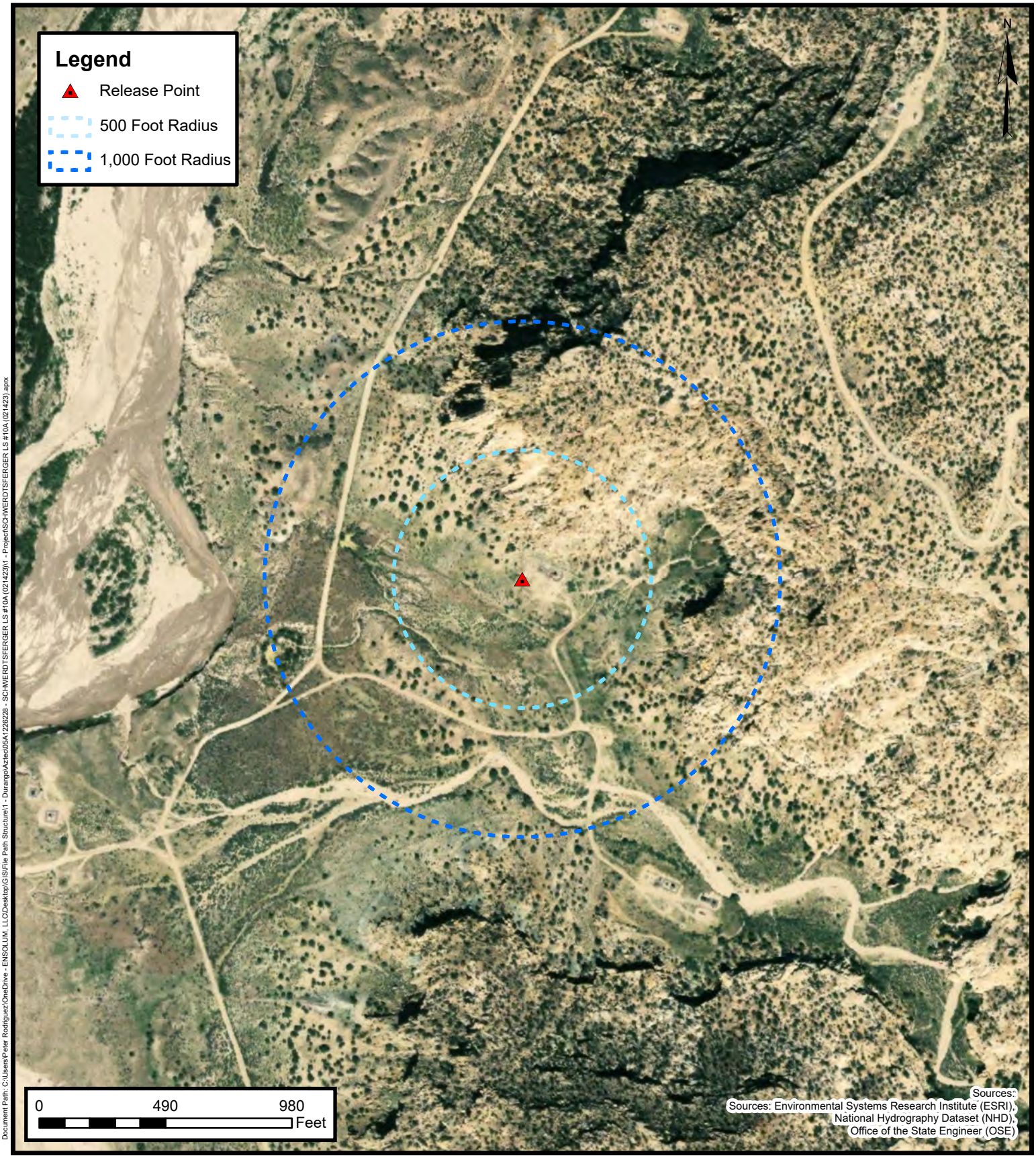
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

300 Foot Radius Occupied Structure Identification

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE

D



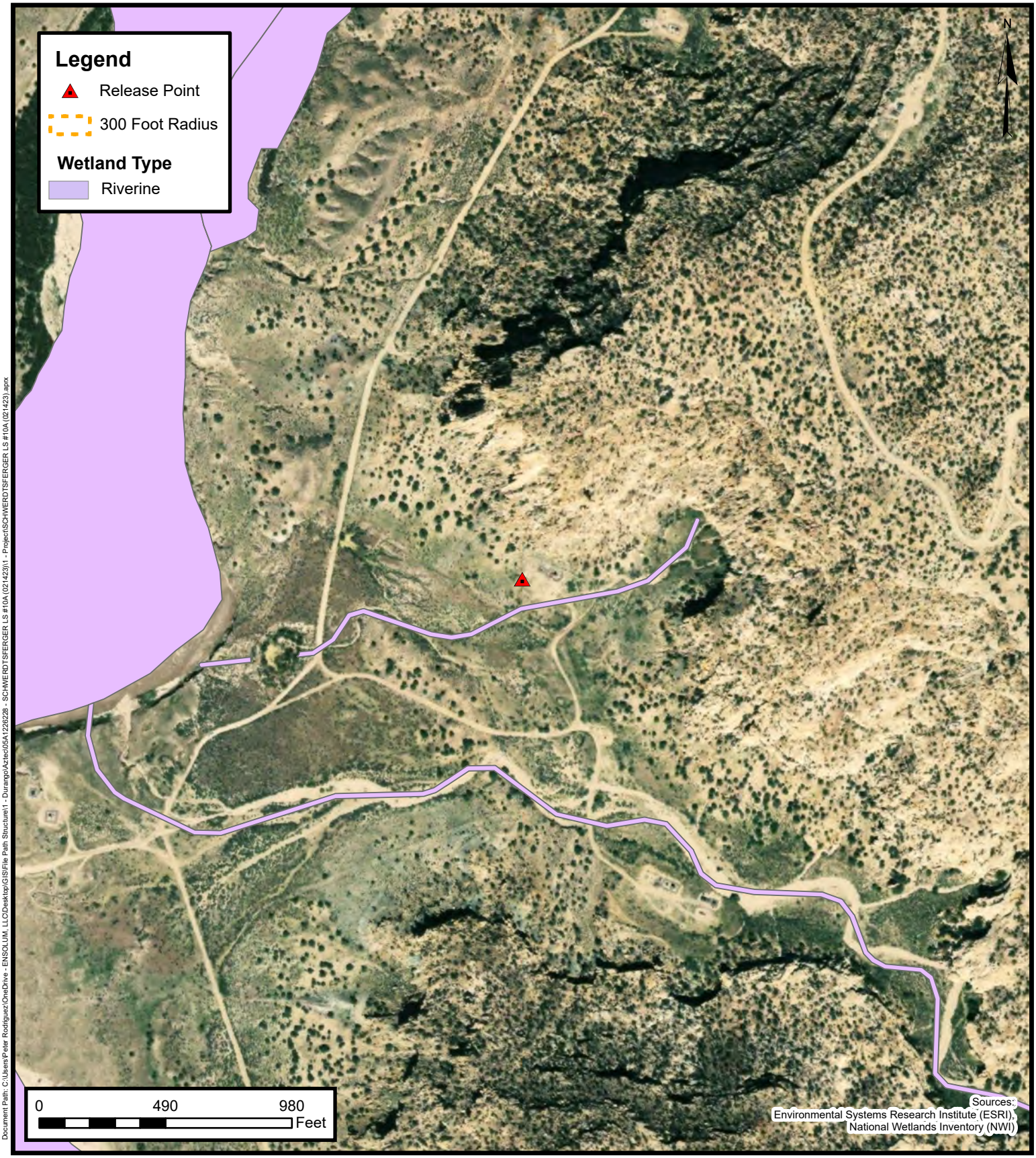
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Water Well and Natural Spring Location

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE

E



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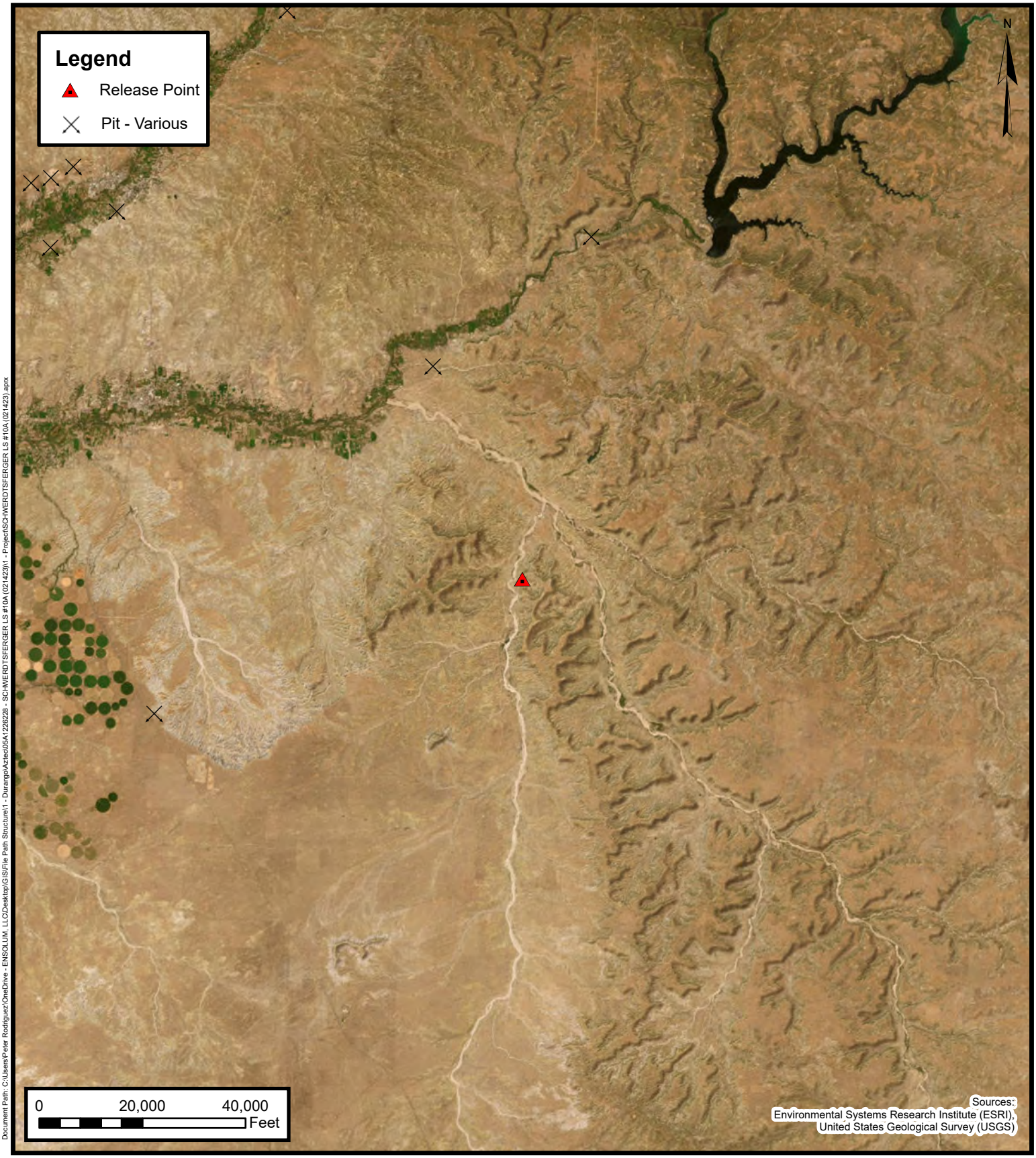
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Wetlands

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE
F



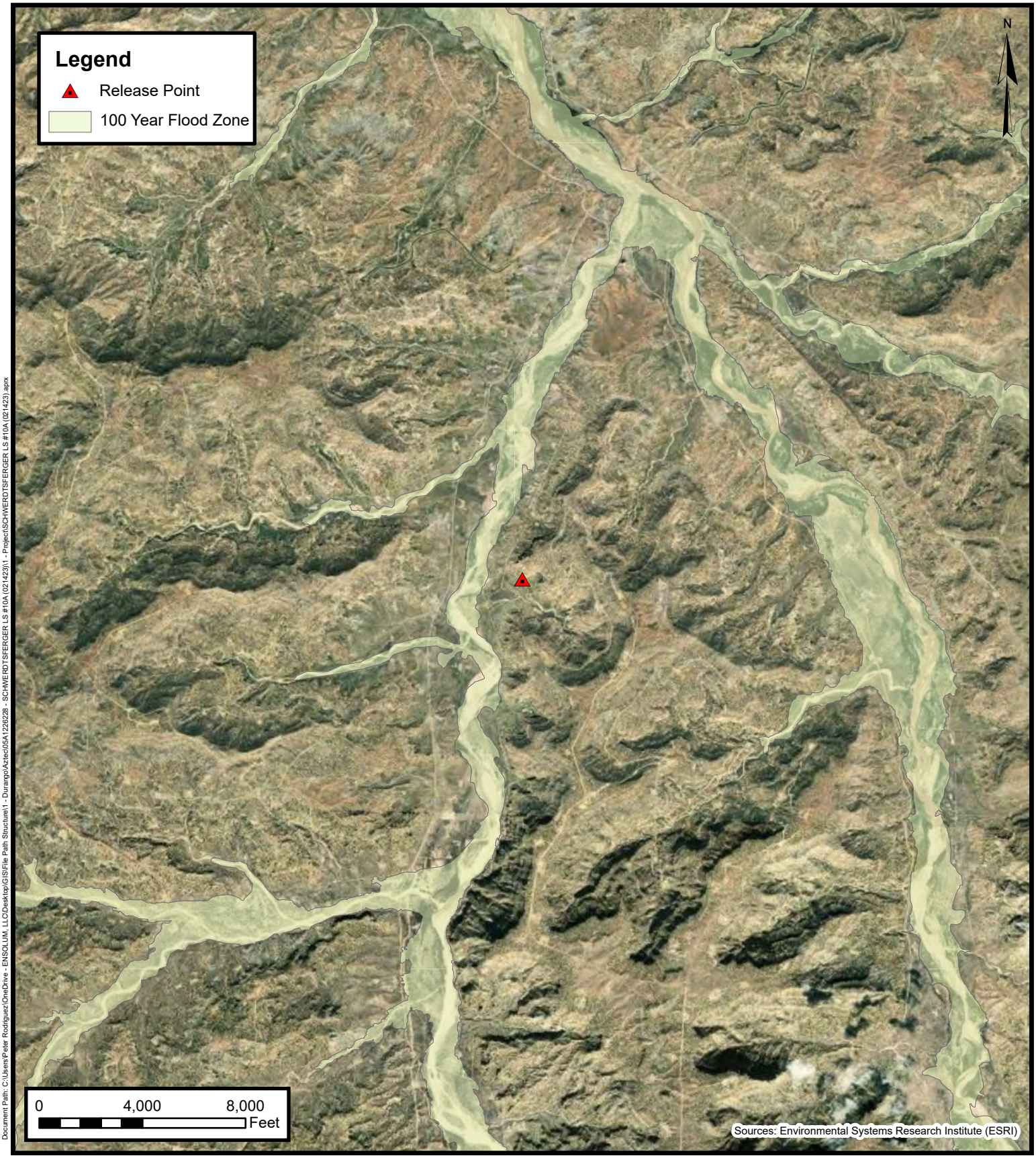
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Mines, Mills, and Quarries

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE

G



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ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

100-Year Flood Plain Map

Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/2023)
Project Number: 05A1226228
Unit Letter D, S31 T28N R8W, San Juan County, New Mexico
36.622994, -107.728619

FIGURE
H

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

No records found.

PLSS Search:

Section(s): 31, 30, 29, 32 **Township:** 28N **Range:** 08W

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

No records found.

PLSS Search:

Section(s): 6, 5 **Township:** 27N **Range:** 08W

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

No records found.

PLSS Search:

Section(s): 1 **Township:** 27N **Range:** 09W

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

No records found.

PLSS Search:

Section(s): 25, 36 **Township:** 28N **Range:** 09W

#2 = 30-045-07016

#3 = 30-045-20827

#1A = 30-045-26487

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

Operator MERIDIAN OIL Location: Unit NW Sec. 32 Twp 28 Rng 8

Name of Well/Wells or Pipeline Serviced PHILLIPS #2, #3, #1A

cps 646w

Elevation 6739' Completion Date 10/5/73 Total Depth 700' 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. N/A

Depths gas encountered: N/A

Type & amount of coke breeze used: 9000 lbs.

Depths anodes placed: 525', 515', 495', 485', 440', 430', 420', 355', 335'

Depths vent pipes placed: N/A

Vent pipe perforations: 487'

Remarks: gb #2

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

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

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

MERIDIAN OIL INC.
Farmington Region
Post Office Box 4289
Farmington, New Mexico 87499
(505) 327-0251

OK General

Drilling Log (Attach Hereto) ☒ WELL CASING

CATHODIC PROTECTION CONSTRUCTION REPORT

DAILY LOG

Completion Date 11-11-87

CPS #	Well Name, Line or Plant:	Work Order #	Static:	Ins. Union Check
646-W	Phillips # 1-A Phillips #2 Phillips # 3			☒ Good ☐ Bad

Location:	Anode Size:	Anode Type:	Size Bit:
NW 32-28-8	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
540'	530'				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	380	372	364	356	348	340	272	264	200	190
Anode Output (Amps)	3.6	3.8	4.8	4.8	3.9	3.1	3.3	3.4	3.9	3.2
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 12.05	Amps 15.2	Ohms .79			

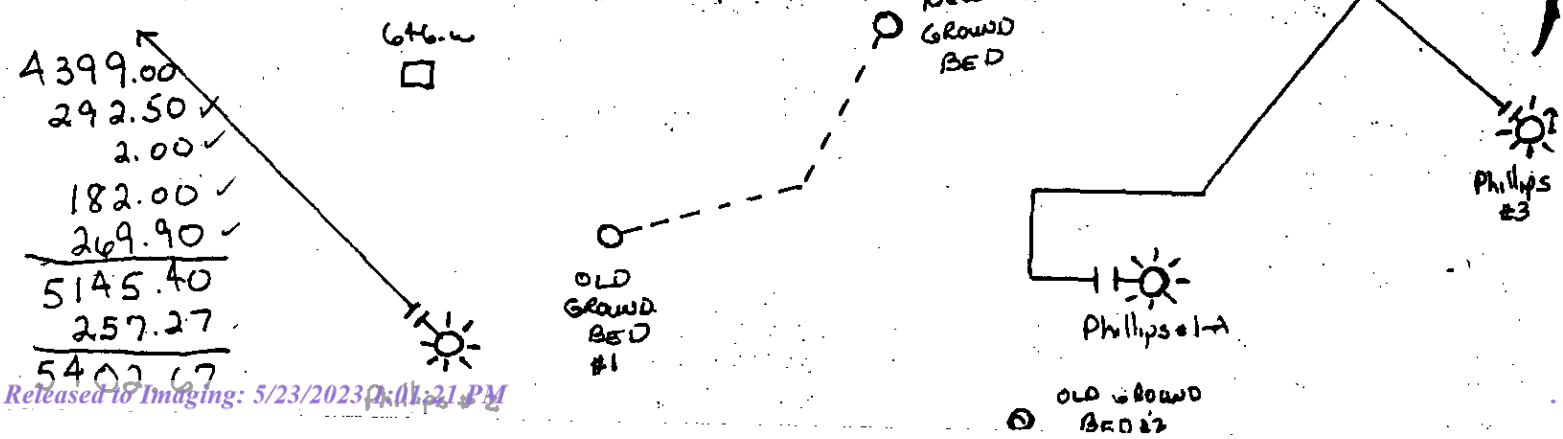
Remarks: DRILLED 540, LOGGED 530'. HIT WATER BETWEEN 160' - 180' NOT ENOUGH for SAMPLE. INSTALLED 535' of 1" PVC VENT PIPE; PERFORATED 460'

Rectifier Size: — V — A
Addn'l Depth 30' ✓
Depth Credit:
Extra Cable: 10' ✓
Ditch & 1 Cable: 260'
Ditch & 2 Cable:
25' Meter Pole: —
20' Meter Pole: —
10' Stub Pole: —
Junction Box: 1

All Construction Completed

M. Williams
(Signature)

GROUND BED LAYOUT SKETCH



MERIDIAN OIL

P. O. BOX 4289-Phone 327-0251
FARMINGTON, NM

Date 11-11-87

DEEP WELL GROUNDBED LOG

Company MERIDIAN O.I

Well No. Phillips#1-A Location NW 32-28-8 Volts Applied 12.05 Amperes .79 .15.

0																			
5																			
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195	2.5																		
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205	1.0																		
210	.8																		
215	.7																		
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225		.7																	
230		.9																	
235		.9																	
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260		1.7																	
265		1.6																	
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275		.8																	
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330		1.0																	
335		1.7																	
340		1.6																	
345		2.2																	
350		2.1																	
355		1.9																	
360		2.3																	
365		1.8																	
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415		.6																	
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425		.5																	
430		.6																	
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885																			
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895																			
900																			

1414

4- 30-045-20924
3E- 30-045-26485
800- 30-045-27190

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 N Sec. 32 Twp 28 Rng 8

Name of Well/Wells or Pipeline Serviced PHILLIPS #4, #3E, #800

cps 2160w

Elevation 6398' Completion Date 7/5/89 Total Depth 240' 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. 100'

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 189', 173', 165', 158'

Depths vent pipes placed: N/A

Vent pipe perforations: N/A

Remarks: gb #2

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

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

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

Form C-138 (Rev. 10-82)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Compact

Drilling Log (Attach Hereto) ☒

Completion Date 7-5-89

CPS #	Well Name, Line or Plant:	Work Order #	Static:	Ins. Union Check
2160-W	Phillips #800 ①	F/C 3541A	600' S = .897	☒ Good ☐ Bad
	Phillips #3-E ③	D/K 54271A	600' S = .811	
	Phillips #4 300336 ②	P/C 44390A	600' SW = .853	

Location:	Anode Size:	Anode Type:	Size Bit:
N32-28-8	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
500'/240'	240'				

← 1st hole 2nd hole →

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	185'	178'	171'	164'	157'	189'	181'	173'	165'	158
Anode Output (Amps)	3.4	4.9	7.2	7.2	6.9	2.5	4.3	4.9	5.2	3.2

	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Anode Depth										
Anode Output (Amps)										

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 12.17	Amps 13.5	Ohms .901		

Remarks: DRILLED 500' HOLE CAVED IN AT 225' PUT 5 ANODES IN 1ST HOLE THEN MOVED OVER & DRILLED 2ND HOLE 240' & INSTALLED REMAINING 5 ANODES. DRILLER SAID DAMP AT 100'. INSTALLED 245' of 1" PVC VENT PIPE perforated BOTTOM 260'

* Build Power (METER DROP)

Rectifier Size: 60 V 30 A
Addn'l Depth
Depth Credit: 260' 3.75
Extra Cable: 380' .20
Ditch & 1 Cable: 1220' .70
25' Meter Pole:
20' Meter Pole: 1
10' Stub Pole:
Junction Box: 1 ✓

3870.00 ✓
789.00 ✓
-975.00 ✓
76.00 ✓
854.00 ✓
312.50 ✓
237.00 ✓

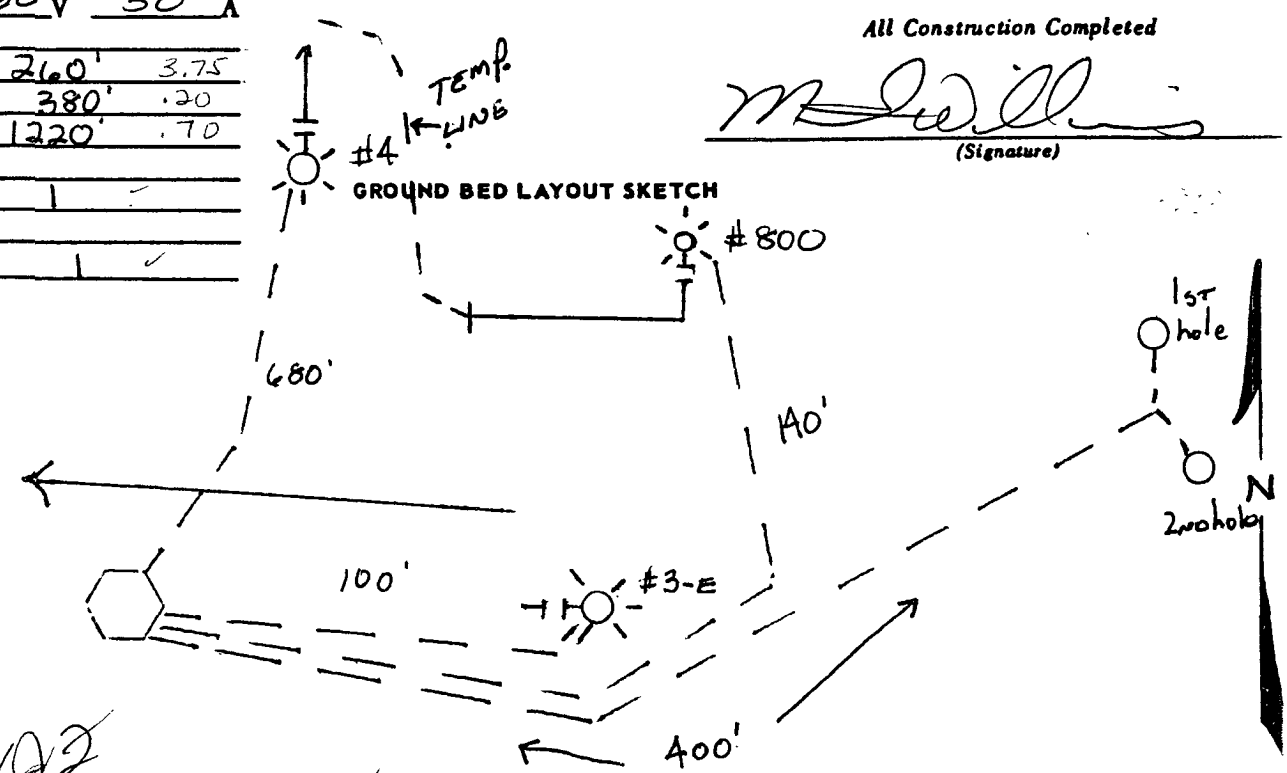
5163.50 ✓
258.18 ✓

5421.68 OKJZ

All Construction Completed

(Signature)

GROUND BED LAYOUT SKETCH



6398

D. Cross DRILLING CO.

Drill No. 3 2140

DRILLER'S WELL LOG

S. P. No. Phillips #800 Date 6-30-89

Client Meridian Oil Co. Prospect

County SAN JUAN State New Mex.

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

FROM	TO	FORMATION — COLOR — HARDNESS
0	150	Sandstone
150	185	Shale
185	210	Sandy Shale
210	270	Sandstone
270	295	Sandy Shale
295	315	Shale
315	440	Sandstone
440	460	Shale
460	500	Sandstone

Mud Bran Lime

Rock Bit Number Make

Remarks: Damp @ 100'

Driller Ronnie Brown

D. CRASS DRILLING CO.

Drill No. 3

2160

Redrill. DRILLER'S WELL LOG

S. P. No. Phillips #800 Date 7-5-89

Client Meridian Oil Co. Prospect

County SAN JUAN State New Mex

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

FROM	TO	FORMATION — COLOR — HARDNESS
0	100	SANDstone
100	110	Shale
110	130	SANDstone
130	160	SANDy Shale
160	195	Shale
195	205	SANDstone
205	215	Shale
215	240	SANDstone

Mud Bran Lime

Rock Bit Number Make

Remarks: DAMP @ 100'

Driller Lonnie Brown

ENSOLUM

APPENDIX C

Executed C-138 Solid Waste Acceptance Form

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

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

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:
Schwerdtsferger LS #10A

AFE: N64745
PM: ME Eddleman
Pay Key: AM14058

2. Location of Material (Street Address, City, State or ULSTR):
UL D Section 31 T28N R8W; 36.622994, -107.728619

Feb 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) 632 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 2-8-2023, 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: Envivo Manager DATE: 2/13/23

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
Schwerdtsferger LS #10A (02/14/23)
Ensolum Project No. 05A1226228

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 excavation (second sampling event).	

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Schwerdtsferger LS #10A (02/14/23)
Ensolum Project No. 05A1226228

ENSOLUM

Photograph 4 Photograph Description: View of the site after initial restoration.	
Photograph 5 Photograph Description: View of the site after initial restoration.	

ENSOLUM

APPENDIX E

Regulatory Correspondence

From: Kyle Summers
To: Chad D"Aponti
Cc: Ranee Deechilly
Subject: FW: [EXTERNAL] Schwerdtsferger LS #10A - UL D Section 31 T28N R8W; 36.622994, -107.728619 - Incident # nAPP2304533224
Date: Wednesday, February 22, 2023 7:55:01 AM
Attachments: image004.png
image005.png
image006.png

Kyle Summers
Principal
903-821-5603
Ensolum, LLC

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Wednesday, February 22, 2023 7:30 AM
To: Long, Thomas <tjlong@eprod.com>; slandon@blm.gov
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: RE: [EXTERNAL] Schwerdtsferger LS #10A - UL D Section 31 T28N R8W; 36.622994, -107.728619 - Incident # nAPP2304533224

[**EXTERNAL EMAIL**]

Tom,

Thank you for the notice. Your variance request specifically addressing 19.15.29.12D (1a) NMAC is approved.

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.

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: Wednesday, February 22, 2023 7:28 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; slandon@blm.gov
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: [EXTERNAL] Schwerdtsferger LS #10A - UL D Section 31 T28N R8W; 36.622994, -107.728619 - Incident # nAPP2304533224

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Nelson/Sherrie,

This email is a sample notification and variance request. Enterprise is requesting a variance for required 48 hour notification per 19.15.29.12D (1a) NMAC. Enterprise would like to collect closure samples tomorrow February 23, 2023 at 10:00 a.m. at the Schwerdtsferger LS #10A excavation. Please acknowledge acceptance of this variance request. 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
Schwerdtsferger LS #10A (02/14/23)
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 Diposal/Remediation													
TS-1	2.16.23	C	8	**110**	450	62	470	**1,100**	19,000	320	<47	**19,000**	570
Excavation Composite Soil Samples													
S-1	2.23.23	C	21	0.018	0.080	<0.036	0.15	0.25	<3.6	<9.8	<49	ND	<60
S-2	2.23.23	C	21	<0.019	0.047	<0.038	0.12	0.17	<3.8	<9.9	<49	ND	<60
S-3	2.23.23	C	0 to 21	<0.017	0.041	<0.033	0.12	0.16	<3.3	<9.1	<45	ND	<60
S-4	2.23.23	C	0 to 21	<0.022	0.046	<0.045	0.12	0.17	<4.5	<9.1	<46	ND	<59
S-5	2.23.23	C	0 to 21	<0.019	0.075	<0.038	0.28	0.36	<3.8	<9.7	<48	ND	<60
S-6	2.23.23	C	0 to 21	0.019	0.099	<0.036	0.33	0.45	<3.6	<9.5	<47	ND	<60
S-7	2.23.23	C	0 to 21	<0.017	0.052	<0.035	0.19	0.24	<3.5	<9.7	<48	ND	<60
S-8	2.23.23	C	0 to 21	<0.019	0.094	<0.038	0.42	0.51	<3.8	<9.2	<46	ND	<60
S-9	2.23.23	C	0 to 21	<0.020	0.094	<0.040	0.37	0.46	<4.0	<9.3	<47	ND	<60
S-10	2.23.23	C	0 to 21	0.020	0.11	0.039	0.44	0.61	<3.6	<9.7	<48	ND	<60
S-11	2.23.23	C	0 to 21	0.020	0.089	<0.038	0.31	0.42	<3.8	<9.3	<46	ND	<60
S-12	2.23.23	C	0 to 21	<0.019	0.078	<0.037	0.29	0.37	<3.7	<9.2	<46	ND	<60

*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)

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

ENSOLUM

APPENDIX 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

February 20, 2023

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

RE: Schwerdtsferger LS 10A OrderNo.: 2302774

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/17/2023 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

Analytical Report
Lab Order **2302774**
Date Reported: **2/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** TS-1
Project: Schwerdtsferger LS 10A **Collection Date:** 2/16/2023 2:00:00 PM
Lab ID: 2302774-001 **Matrix:** SOIL **Received Date:** 2/17/2023 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	570	60		mg/Kg	20	2/17/2023 11:04:18 AM	73239
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	320	9.4		mg/Kg	1	2/17/2023 10:00:57 AM	73232
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/17/2023 10:00:57 AM	73232
Surr: DNOP	100	69-147		%Rec	1	2/17/2023 10:00:57 AM	73232
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**	
Gasoline Range Organics (GRO)	19000	1800		mg/Kg	500	2/17/2023 12:25:00 PM	GS9468
Surr: BFB	141	37.7-212		%Rec	500	2/17/2023 12:25:00 PM	GS9468
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**	
Benzene	110	0.92		mg/Kg	50	2/17/2023 11:07:00 AM	BS9468
Toluene	450	18		mg/Kg	500	2/17/2023 12:25:00 PM	BS9468
Ethylbenzene	62	1.8		mg/Kg	50	2/17/2023 11:07:00 AM	BS9468
Xylenes, Total	470	37		mg/Kg	500	2/17/2023 12:25:00 PM	BS9468
Surr: 4-Bromofluorobenzene	211	70-130	S	%Rec	50	2/17/2023 11:07:00 AM	BS9468

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2302774**

20-Feb-23

Client: ENSOLUM

Project: Schwerdtsferger LS 10A

Sample ID: **MB-73239**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **73239**	RunNo: **94696**
Prep Date: **2/17/2023**	Analysis Date: **2/17/2023**	SeqNo: **3423573** Units: **mg/Kg**

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

Sample ID: **LCS-73239**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **73239**	RunNo: **94696**
Prep Date: **2/17/2023**	Analysis Date: **2/17/2023**	SeqNo: **3423574** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of 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#: **2302774**
20-Feb-23

Client: ENSOLUM
Project: Schwerdtsferger LS 10A

Sample ID: **2302774-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **TS-1** Batch ID: **73232** RunNo: **94691**
Prep Date: **2/17/2023** Analysis Date: **2/17/2023** SeqNo: **3423166** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	300	9.4	47.04	320.7	-52.4	54.2	135			S
Surr: DNOP	4.7		4.704		100	69	147			

Sample ID: **2302774-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **TS-1** Batch ID: **73232** RunNo: **94691**
Prep Date: **2/17/2023** Analysis Date: **2/17/2023** SeqNo: **3423167** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	260	9.5	47.26	320.7	-126	54.2	135	12.5	29.2	S
Surr: DNOP	4.5		4.726		95.9	69	147	0	0	

Sample ID: **LCS-73232** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **73232** RunNo: **94691**
Prep Date: **2/17/2023** Analysis Date: **2/17/2023** SeqNo: **3423170** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	87.0	61.9	130			
Surr: DNOP	4.5		5.000		90.8	69	147			

Sample ID: **MB-73232** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **73232** RunNo: **94691**
Prep Date: **2/17/2023** Analysis Date: **2/17/2023** SeqNo: **3423171** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.5		10.00		85.3	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#: **2302774**

20-Feb-23

Client: ENSOLUM

Project: Schwerdtsferger LS 10A

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

Client ID: **LCSS** Batch ID: **GS94683** RunNo: **94683**

Prep Date: Analysis Date: **2/17/2023** SeqNo: **3422956** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	115	72.3	137			
Surr: BFB	1300		1000		131	37.7	212			

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

Client ID: **PBS** Batch ID: **GS94683** RunNo: **94683**

Prep Date: Analysis Date: **2/17/2023** SeqNo: **3422957** 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		109	37.7	212			

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#: **2302774**

20-Feb-23

Client: ENSOLUM

Project: Schwerdtsferger LS 10A

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **BS94683**	RunNo: **94683**
Prep Date:	Analysis Date: **2/17/2023**	SeqNo: **3422965** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	70	130			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **BS94683**	RunNo: **94683**
Prep Date:	Analysis Date: **2/17/2023**	SeqNo: **3423273** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.2	80	120			
Toluene	0.97	0.050	1.000	0	97.2	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.5	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.5	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

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: 2302774 | RcptNo: 1

Received By: Juan Rojas 2/17/2023 6:50:00 AM

Completed By: Juan Rojas 2/17/2023 6:59:09 AM

Reviewed By: TMC 2/17/23

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: JR 2/17/23

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: _____

16. Additional remarks:

Client missing phone number and email address on COC. JR 2/17/23

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good				

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 606 S Rio Grande Suit 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 2-17-23

Project Name: Schwerdtsferger LS #10A

Project #:

Project Manager: K. Sommers

Sampler: C DAponti

On Ice: ☒ Yes ☐ No

# of Coolers: 1 Marty

Cooler Temp (Including CF): 0.1+0.1=0.2 (°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. (Jn 2/17/23)	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)
2/16	1400	S	TS-1	1 4oz jar	Cool	23027-74 -001	✓	✓					✓			
2/16		S	S-2		Cool		✓	✓					✓			
2/16		S	S-3		Cool		✓	✓					✓			
2/16		S	S-4		Cool		✓	✓					✓			
2/16		S	S-5		Cool		✓	✓					✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2/16/23	1534				2/16/23	1536
2/16/23	1752			Courier	2/17/23	6:50

Remarks: Tom Long
PayKey - AM14058
AFE # N64745

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.

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

March 02, 2023

Kyle Summers

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

RE: Schwerdtsferger LS 10A OrderNo.: 2302A63

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 12 sample(s) on 2/24/2023 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 **2302A63**
Date Reported: **3/2/2023**

CLIENT: ENSOLUM **Client Sample ID:** S-1
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:00:00 AM
Lab ID: 2302A63-001 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 11:47:56 AM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/24/2023 11:17:39 AM	73365
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/24/2023 11:17:39 AM	73365
Surr: DNOP	97.2	69-147		%Rec	1	2/24/2023 11:17:39 AM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	2/24/2023 11:11:03 AM	GS94858
Surr: BFB	101	37.7-212		%Rec	1	2/24/2023 11:11:03 AM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.018	0.018		mg/Kg	1	2/24/2023 11:11:03 AM	R94858
Toluene	0.080	0.036		mg/Kg	1	2/24/2023 11:11:03 AM	R94858
Ethylbenzene	ND	0.036		mg/Kg	1	2/24/2023 11:11:03 AM	R94858
Xylenes, Total	0.15	0.073		mg/Kg	1	2/24/2023 11:11:03 AM	R94858
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	2/24/2023 11:11:03 AM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-2
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:05:00 AM
Lab ID: 2302A63-002 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 12:00:18 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/24/2023 11:31:09 AM	73365
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/24/2023 11:31:09 AM	73365
Surr: DNOP	96.1	69-147		%Rec	1	2/24/2023 11:31:09 AM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	2/24/2023 11:34:53 AM	GS94858
Surr: BFB	102	37.7-212		%Rec	1	2/24/2023 11:34:53 AM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.019		mg/Kg	1	2/24/2023 11:34:53 AM	R94858
Toluene	0.047	0.038		mg/Kg	1	2/24/2023 11:34:53 AM	R94858
Ethylbenzene	ND	0.038		mg/Kg	1	2/24/2023 11:34:53 AM	R94858
Xylenes, Total	0.12	0.075		mg/Kg	1	2/24/2023 11:34:53 AM	R94858
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	2/24/2023 11:34:53 AM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-3
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:10:00 AM
Lab ID: 2302A63-003 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 12:12:39 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/24/2023 11:44:44 AM	73365
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/24/2023 11:44:44 AM	73365
Surr: DNOP	91.1	69-147		%Rec	1	2/24/2023 11:44:44 AM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	2/24/2023 11:58:42 AM	GS94858
Surr: BFB	105	37.7-212		%Rec	1	2/24/2023 11:58:42 AM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.017		mg/Kg	1	2/24/2023 11:58:42 AM	R94858
Toluene	0.041	0.033		mg/Kg	1	2/24/2023 11:58:42 AM	R94858
Ethylbenzene	ND	0.033		mg/Kg	1	2/24/2023 11:58:42 AM	R94858
Xylenes, Total	0.12	0.066		mg/Kg	1	2/24/2023 11:58:42 AM	R94858
Surr: 4-Bromofluorobenzene	95.9	70-130		%Rec	1	2/24/2023 11:58:42 AM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-4
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:15:00 AM
Lab ID: 2302A63-004 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	59		mg/Kg	20	2/24/2023 12:25:00 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/24/2023 11:58:08 AM	73365
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/24/2023 11:58:08 AM	73365
Surr: DNOP	94.3	69-147		%Rec	1	2/24/2023 11:58:08 AM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	2/24/2023 12:22:37 PM	GS94858
Surr: BFB	104	37.7-212		%Rec	1	2/24/2023 12:22:37 PM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.022		mg/Kg	1	2/24/2023 12:22:37 PM	R94858
Toluene	0.046	0.045		mg/Kg	1	2/24/2023 12:22:37 PM	R94858
Ethylbenzene	ND	0.045		mg/Kg	1	2/24/2023 12:22:37 PM	R94858
Xylenes, Total	0.12	0.089		mg/Kg	1	2/24/2023 12:22:37 PM	R94858
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	2/24/2023 12:22:37 PM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-5
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:20:00 AM
Lab ID: 2302A63-005 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 12:37:21 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/24/2023 12:12:03 PM	73365
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/24/2023 12:12:03 PM	73365
Surr: DNOP	93.6	69-147		%Rec	1	2/24/2023 12:12:03 PM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	2/24/2023 12:46:35 PM	GS94858
Surr: BFB	108	37.7-212		%Rec	1	2/24/2023 12:46:35 PM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.019		mg/Kg	1	2/24/2023 12:46:35 PM	R94858
Toluene	0.075	0.038		mg/Kg	1	2/24/2023 12:46:35 PM	R94858
Ethylbenzene	ND	0.038		mg/Kg	1	2/24/2023 12:46:35 PM	R94858
Xylenes, Total	0.28	0.076		mg/Kg	1	2/24/2023 12:46:35 PM	R94858
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	2/24/2023 12:46:35 PM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-6
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:25:00 AM
Lab ID: 2302A63-006 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 12:49:42 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/24/2023 12:25:44 PM	73365
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/24/2023 12:25:44 PM	73365
Surr: DNOP	93.8	69-147		%Rec	1	2/24/2023 12:25:44 PM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	2/24/2023 1:10:45 PM	GS94858
Surr: BFB	108	37.7-212		%Rec	1	2/24/2023 1:10:45 PM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.019	0.018		mg/Kg	1	2/24/2023 1:10:45 PM	R94858
Toluene	0.099	0.036		mg/Kg	1	2/24/2023 1:10:45 PM	R94858
Ethylbenzene	ND	0.036		mg/Kg	1	2/24/2023 1:10:45 PM	R94858
Xylenes, Total	0.33	0.073		mg/Kg	1	2/24/2023 1:10:45 PM	R94858
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	2/24/2023 1:10:45 PM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-7
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:30:00 AM
Lab ID: 2302A63-007 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 1:26:45 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/24/2023 12:39:24 PM	73365
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/24/2023 12:39:24 PM	73365
Surr: DNOP	94.2	69-147		%Rec	1	2/24/2023 12:39:24 PM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	2/24/2023 1:34:25 PM	GS94858
Surr: BFB	106	37.7-212		%Rec	1	2/24/2023 1:34:25 PM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.017		mg/Kg	1	2/24/2023 1:34:25 PM	R94858
Toluene	0.052	0.035		mg/Kg	1	2/24/2023 1:34:25 PM	R94858
Ethylbenzene	ND	0.035		mg/Kg	1	2/24/2023 1:34:25 PM	R94858
Xylenes, Total	0.19	0.070		mg/Kg	1	2/24/2023 1:34:25 PM	R94858
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	2/24/2023 1:34:25 PM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-8
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:35:00 AM
Lab ID: 2302A63-008 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 1:39:06 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/24/2023 12:52:51 PM	73365
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/24/2023 12:52:51 PM	73365
Surr: DNOP	96.3	69-147		%Rec	1	2/24/2023 12:52:51 PM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	2/24/2023 1:57:47 PM	GS94858
Surr: BFB	107	37.7-212		%Rec	1	2/24/2023 1:57:47 PM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.019		mg/Kg	1	2/24/2023 1:57:47 PM	R94858
Toluene	0.094	0.038		mg/Kg	1	2/24/2023 1:57:47 PM	R94858
Ethylbenzene	ND	0.038		mg/Kg	1	2/24/2023 1:57:47 PM	R94858
Xylenes, Total	0.42	0.076		mg/Kg	1	2/24/2023 1:57:47 PM	R94858
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	2/24/2023 1:57:47 PM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-9
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:40:00 AM
Lab ID: 2302A63-009 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 1:51:27 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/24/2023 1:06:35 PM	73365
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/24/2023 1:06:35 PM	73365
Surr: DNOP	97.5	69-147		%Rec	1	2/24/2023 1:06:35 PM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	2/24/2023 2:21:17 PM	GS94858
Surr: BFB	107	37.7-212		%Rec	1	2/24/2023 2:21:17 PM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.020		mg/Kg	1	2/24/2023 2:21:17 PM	R94858
Toluene	0.094	0.040		mg/Kg	1	2/24/2023 2:21:17 PM	R94858
Ethylbenzene	ND	0.040		mg/Kg	1	2/24/2023 2:21:17 PM	R94858
Xylenes, Total	0.37	0.079		mg/Kg	1	2/24/2023 2:21:17 PM	R94858
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	2/24/2023 2:21:17 PM	R94858

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.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2302A63**
Date Reported: **3/2/2023**

CLIENT: ENSOLUM **Client Sample ID:** S-10
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:45:00 AM
Lab ID: 2302A63-010 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 2:03:47 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/24/2023 1:20:22 PM	73365
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/24/2023 1:20:22 PM	73365
Surr: DNOP	97.0	69-147		%Rec	1	2/24/2023 1:20:22 PM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	2/24/2023 2:44:57 PM	GS94858
Surr: BFB	102	37.7-212		%Rec	1	2/24/2023 2:44:57 PM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.020	0.018		mg/Kg	1	2/24/2023 2:44:57 PM	R94858
Toluene	0.11	0.036		mg/Kg	1	2/24/2023 2:44:57 PM	R94858
Ethylbenzene	0.039	0.036		mg/Kg	1	2/24/2023 2:44:57 PM	R94858
Xylenes, Total	0.44	0.073		mg/Kg	1	2/24/2023 2:44:57 PM	R94858
Surr: 4-Bromofluorobenzene	92.0	70-130		%Rec	1	2/24/2023 2:44:57 PM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-11
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:50:00 AM
Lab ID: 2302A63-011 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 2:16:08 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/24/2023 1:34:05 PM	73365
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/24/2023 1:34:05 PM	73365
Surr: DNOP	97.5	69-147		%Rec	1	2/24/2023 1:34:05 PM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	2/24/2023 3:32:04 PM	GS94858
Surr: BFB	105	37.7-212		%Rec	1	2/24/2023 3:32:04 PM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	0.020	0.019		mg/Kg	1	2/24/2023 3:32:04 PM	R94858
Toluene	0.089	0.038		mg/Kg	1	2/24/2023 3:32:04 PM	R94858
Ethylbenzene	ND	0.038		mg/Kg	1	2/24/2023 3:32:04 PM	R94858
Xylenes, Total	0.31	0.076		mg/Kg	1	2/24/2023 3:32:04 PM	R94858
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	2/24/2023 3:32:04 PM	R94858

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 **2302A63**
Date Reported: **3/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-12
Project: Schwerdtsferger LS 10A **Collection Date:** 2/23/2023 10:55:00 AM
Lab ID: 2302A63-012 **Matrix:** MEOH (SOIL) **Received Date:** 2/24/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	2/24/2023 2:28:29 PM	73370
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/24/2023 2:30:16 PM	73365
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/24/2023 2:30:16 PM	73365
Surr: DNOP	97.8	69-147		%Rec	1	2/24/2023 2:30:16 PM	73365
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	2/24/2023 3:55:34 PM	GS94858
Surr: BFB	103	37.7-212		%Rec	1	2/24/2023 3:55:34 PM	GS94858
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**	
Benzene	ND	0.019		mg/Kg	1	2/24/2023 3:55:34 PM	R94858
Toluene	0.078	0.037		mg/Kg	1	2/24/2023 3:55:34 PM	R94858
Ethylbenzene	ND	0.037		mg/Kg	1	2/24/2023 3:55:34 PM	R94858
Xylenes, Total	0.29	0.075		mg/Kg	1	2/24/2023 3:55:34 PM	R94858
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	2/24/2023 3:55:34 PM	R94858

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#: **2302A63**

02-Mar-23

Client: ENSOLUM

Project: Schwerdtsferger LS 10A

Sample ID: **MB-73370**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **73370**	RunNo: **94862**
Prep Date: **2/24/2023**	Analysis Date: **2/24/2023**	SeqNo: **3428892** Units: **mg/Kg**

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

Sample ID: **LCS-73370**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **73370**	RunNo: **94862**
Prep Date: **2/24/2023**	Analysis Date: **2/24/2023**	SeqNo: **3428893** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.9	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#: **2302A63**

02-Mar-23

Client: ENSOLUM

Project: Schwerdtsferger LS 10A

Sample ID: **LCS-73365** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **73365** RunNo: **94859**

Prep Date: **2/24/2023** Analysis Date: **2/24/2023** SeqNo: **3428495** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	79.4	61.9	130			
Surr: DNOP	4.5		5.000		90.4	69	147			

Sample ID: **2302A63-012AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-12** Batch ID: **73365** RunNo: **94859**

Prep Date: **2/24/2023** Analysis Date: **2/24/2023** SeqNo: **3430104** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	49.95	0	97.7	54.2	135			
Surr: DNOP	5.0		4.995		100	69	147			

Sample ID: **2302A63-012AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-12** Batch ID: **73365** RunNo: **94859**

Prep Date: **2/24/2023** Analysis Date: **2/24/2023** SeqNo: **3430105** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.2	46.00	0	91.3	54.2	135	15.0	29.2	
Surr: DNOP	4.5		4.600		97.6	69	147	0	0	

Sample ID: **MB-73365** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **73365** RunNo: **94844**

Prep Date: **2/24/2023** Analysis Date: **2/24/2023** SeqNo: **3430288** 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	9.9		10.00		98.7	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#: **2302A63**

02-Mar-23

Client: ENSOLUM

Project: Schwerdtsferger LS 10A

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS94858**	RunNo: **94858**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3428451** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.8	72.3	137			
Surr: BFB	2000		1000		195	37.7	212			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS94858**	RunNo: **94858**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3428453** 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	1000		1000		103	37.7	212			

Sample ID: **2302a63-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-1**	Batch ID: **GS94858**	RunNo: **94858**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3429322** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	3.6	18.18	1.498	98.2	70	130			
Surr: BFB	1400		727.3		197	37.7	212			

Sample ID: **2302a63-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-1**	Batch ID: **GS94858**	RunNo: **94858**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3429323** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	3.6	18.18	1.498	97.8	70	130	0.301	20	
Surr: BFB	1400		727.3		198	37.7	212	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#: **2302A63**

02-Mar-23

Client: ENSOLUM

Project: Schwerdtsferger LS 10A

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R94858**	RunNo: **94858**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3428461** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.9	80	120			
Toluene	0.94	0.050	1.000	0	94.5	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.1	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.1	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.5	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R94858**	RunNo: **94858**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3428462** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.4	70	130			

Sample ID: **2302a63-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-2**	Batch ID: **R94858**	RunNo: **94858**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3429329** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.70	0.019	0.7502	0.01560	91.2	68.8	120			
Toluene	0.77	0.038	0.7502	0.04696	96.0	73.6	124			
Ethylbenzene	0.73	0.038	0.7502	0.01838	95.4	72.7	129			
Xylenes, Total	2.3	0.075	2.251	0.1195	95.6	75.7	126			
Surr: 4-Bromofluorobenzene	0.72		0.7502		96.2	70	130			

Sample ID: **2302a63-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-2**	Batch ID: **R94858**	RunNo: **94858**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3429330** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.69	0.019	0.7502	0.01560	90.6	68.8	120	0.721	20	
Toluene	0.76	0.038	0.7502	0.04696	94.8	73.6	124	1.18	20	
Ethylbenzene	0.72	0.038	0.7502	0.01838	93.4	72.7	129	2.07	20	
Xylenes, Total	2.3	0.075	2.251	0.1195	95.3	75.7	126	0.248	20	
Surr: 4-Bromofluorobenzene	0.73		0.7502		97.1	70	130	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

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: 2302A63 | RcptNo: 1

Received By: Tracy Casarrubias 2/24/2023 7:20:00 AM

Completed By: Tracy Casarrubias 2/24/2023 7:38:56 AM

Reviewed By: SR 2/24/23

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: JN 2/24/23

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	1.6	Good	Yes	Morty		

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% Same Day
☐ Standard ☒ Rush 2-24-23

Project Name: Schwerdtfeger LS #10A

Project #:

Project Manager: K Summers

Sampler: C DAponte

On Ice: ☒ Yes ☐ No Morty

# of Coolers: 1

Cooler Temp(including CF): 1.6 - 0 = 1.6 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2302A03	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)
2/23	1000	S	S-1	1 4oz Jar	Cool	001	✓	✓					✓			
2/23	1005	S	S-2		Cool	002	✓	✓					✓			
2/23	1010	S	S-3		Cool	003	✓	✓					✓			
2/23	1015	S	S-4		Cool	004	✓	✓					✓			
2/23	1020	S	S-5		Cool	005	✓	✓					✓			
2/23	1025	S	S-6		Cool	006	✓	✓					✓			
2/23	1030	S	S-7		Cool	007	✓	✓					✓			
2/23	1035	S	S-8		Cool	008	✓	✓					✓			
2/23	1040	S	S-9		Cool	009	✓	✓					✓			
2/23	1045	S	S-10		Cool	010	✓	✓					✓			
2/23	1050	S	S-11		Cool	011	✓	✓					✓			
2/23	1055	S	S-12		Cool	012	✓	✓					✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
2/23/23	1330				2/23/23	1330
2/23/23	1748			Courier	2/24/23	7:20

Remarks: Tom Long
Pay Key - AM 14058
AFE # N 64745
same Day

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

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

CONDITIONS

Operator:	OGRID:
Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	241602
	Action Number: 219309
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/23/2023