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)* **nAPP2226445914**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.858328** Longitude **-107.685634** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Trunk E**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **09/21/2022**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
D	**33**	**31N**	**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): **5-10 BBLS**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **0.532 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On September 10, 2022, Enterprise had a release of natural gas from the Trunk E. The pipeline was isolated, depressurized, locked and tagged out. No liquids were released to the ground surface. No emergency services responded. No fire nor injuries occurred. Remediation and repairs began on September 16, 2022, and Enterprise determined reportable per New Mexico Oil Conservation Division regulation, due to the volume of impacted subsurface soil on September 21, 2022. The remediation was completed on September 27, 2022. The final excavation dimensions measured approximately 13 feet long by 9 feet wide by 12 feet deep. A total of 152 cubic yards of hydrocarbon impacted soil was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm. A third party closure report is included with this "Final." C-141.

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Thomas Long Title: Senior Environmental Scientist

Signature: Thomas Long Date: 6-12-2023

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: 06/13/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

CLOSURE REPORT

Property:

Trunk E (09/21/22)
Unit Letter D, S33 T31N R8W
San Juan County, New Mexico

New Mexico EMNRD OCD Incident ID No. NAPP2226445914

November 28, 2022

Ensolum Project No. 05A1226209

Prepared for:

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

Prepared by:

Landon Daniell
Staff Geologist

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:	Trunk E (09/21/22) (Site)
NM EMNRD OCD Incident ID No.	NAPP2226445914
Location:	36.858328° North, 107.685634° West Unit Letter D, Section 33, Township 31 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 September 10, 2022, Enterprise discovered a release on the Trunk E pipeline. Enterprise personnel subsequently isolated and locked the pipeline out of service. On September 16, 2022, Enterprise initiated activities to repair the pipeline and remediate potential petroleum hydrocarbon impact. On September 21, 2022, Enterprise determined the release was "reportable" due to the estimated volume of impacted soil. The NM EMNRD OCD was subsequently notified.

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

1.2 Project Objective

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

2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. Ensolum, LLC (Ensolum) referenced New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action, during the evaluation and remediation of the Site. The appropriate closure criteria for sites are determined using the siting requirements outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. Ensolum utilized the general site characteristics and information available from NM state agency databases and federal agency geospatial databases to determine the appropriate closure criteria for the Site. Supporting figures and documentation associated with the following Siting bullets are provided in **Appendix B**.

- The NM Office of the State Engineer (OSE) tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). No PODs were identified in the same Public Land Survey System (PLSS) section as the Site. One POD (SJ-00198) was identified in an adjacent PLSS section, but no depth to water was recorded (**Figure A**, **Appendix B**).

- Numerous cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in the same PLSS section and in adjacent sections. The two closest CPWs are

located within 0.5 miles of the Site and are depicted on **Figure B** (**Appendix B**). Documentation for the cathodic protection well located near the Howell D #1 well location indicates a depth to water of approximately 460 feet bgs. This cathodic protection well is located approximately 0.40 miles north of the Site and is approximately 6 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Howell D #4 and #353 well locations indicates a depth to water of approximately 110 feet bgs. This cathodic protection well is located approximately 0.46 miles east of the Site and is approximately 205 feet lower in elevation than the Site.

- The Site is not 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 the identified siting criteria, Enterprise estimates the depth to water at the Site to be greater than 50 feet bgs, resulting in a Tier II ranking. However, the soil requirements of NMAC 19.15.29.13(D)(1) indicate that a minimum of the upper four feet must contain "uncontaminated" soil and that the soils meet Tier I closure criteria listed in Table 1 of NMAC 19.15.29.12. Applicable closure criteria for Tier I soils and Tier II soils (below four feet) remaining in place at the Site include:

Tier II Closure Criteria for Soils Impacted by a Release		
Constituent[1]	**Method**	**Limit**
Chloride	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
TPH (GRO+DRO+MRO)[2]	EPA SW-846 Method 8015	2,500 mg/kg
TPH (GRO+DRO)	EPA SW-846 Method 8015	1,000 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).

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 September 16, 2022, Enterprise initiated activities to 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 13 feet long and 9 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 12 feet bgs. The lithology encountered during the completion of remediation activities consisted primarily of clay and shale.

Approximately 152 cubic yards (yd^3) of petroleum hydrocarbon affected soils and 115 barrels (bbls) of hydro-excavation soil cuttings and water were transported to the Envirotech, Inc., (Envirotech) landfarm near Hilltop, NM for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix C**. The excavation was backfilled with imported fill and was subsequently 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 12 composite soil samples (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) or less sample area per guidelines outlined in Section D of 19.15.29.12 NMAC. Hand tools and the excavator bucket were utilized to obtain fresh aliquots from each area of the excavation. Regulatory correspondence is provided in **Appendix E**.

First Sampling Event

On September 16, 2022, the first sampling event was performed at the Site. The NM EMNRD OCD and BLM were notified of the sampling event although no representatives were present during sampling activities. Composite soil sample S-2 (5') was collected from the floor of the excavation. Composite soil samples S-1 (0'-5'), S-3 (0'-5'), and S-4 (0'-5') were collected from the walls of the excavation.

Subsequent soil analytical results identified TPH concentrations that exceeded the NM EMNRD OCD closure criteria for composite soil sample S-2. In response to the exceedances the excavation was enlarged. The impacted soils were removed by excavation and transported to the landfarm for disposal/remediation.

Second Sampling Event

On September 23, 2022, the second sampling event was performed at the Site. The NM EMNRD OCD and BLM were notified of the sampling event although no representatives were present during sampling activities. Composite sample S-5 (12') was collected from the floor of the excavation. Composite soil samples S-6 (4'-12'), S-7 (0'-4'), S-8 (5'-12'), S-9 (5'-12'), and S-10 (5'-12') were collected from walls of the excavation.

Subsequent soil analytical results identified TPH concentrations that exceeded the NM EMNRD OCD closure criteria for composite soil sample S-9. In response to the exceedances the excavation was enlarged. The impacted soils were removed by excavation and transported to the landfarm for disposal/remediation.

Third Sampling Event

On September 27, 2022, the third sampling event was performed at the Site. The NM EMNRD OCD and BLM were notified of the sampling event although no representatives were present during sampling activities. Composite samples S-11 (0'-4') and S-12 (4'-12') were collected from the walls of the excavation.

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

5.0 SOIL LABORATORY ANALYTICAL METHODS

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

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

6.0 SOIL DATA EVALUATION

Ensolum compared the benzene, BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (S-1, S-4 through S-8, and S-10 through S-12) to the applicable NM EMNRD OCD closure criteria. The soils associated with composite soil samples S-1, S-3, and S-9 were removed from the Site, and therefore, are not included in the following discussion.

- The laboratory analytical results for all composite soil samples associated with soils remaining at the Site indicate benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD criteria of 10 mg/kg.

- The laboratory analytical results for composite soil samples S-5 and S-6 indicate total BTEX concentrations of 32 mg/kg, and 7.3 mg/kg, respectively, which are less than the applicable NM EMNRD OCD closure criteria of 50 mg/kg. The laboratory analytical results for all other composite soil samples associated with soils remaining at the Site indicate that total BTEX is not present in concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for composite soil samples S-5, S-6, S-8, and S-10 indicate combined TPH GRO/DRO concentrations ranging from 37 mg/kg (S-8) to 640 mg/kg (S-5), which are less than the applicable NM EMNRD OCD closure criteria of 100 mg/kg or 1,000 mg/kg (depending on the depth of the represented soil). The laboratory analytical results for all other composite soil samples associated with soils remaining at the Site indicate combined TPH GRO/DRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD closure criteria of 100 mg/kg or 1,000 mg/kg (depending on the depth of the represented soil).

- The laboratory analytical results for composite soil samples S-5, S-6, S-8, and S-10 indicate combined TPH GRO/DRO concentrations ranging from 37 mg/kg (S-8) to 640 mg/kg (S-5), which are less than the applicable NM EMNRD OCD closure criteria of 100 mg/kg or 2,500 mg/kg (depending on the depth of the represented soil.) The laboratory analytical results for all other composite soil samples associated with 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 applicable NM EMNRD OCD closure criteria of 100 mg/kg or 2,500 mg/kg (depending on the depth of the represented soil).

- The laboratory analytical results for all composite soil samples associated with soils remaining at the Site indicate chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD closure criteria of 600 mg/kg or 10,000 mg/kg (depending on the depth of the represented soil).

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

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

- Approximately 152 yd^3 of petroleum hydrocarbon affected soils and 115 bbls of hydro-excavation soil cuttings and water were transported to the Envirotech landfarm for disposal/remediation. The excavation was backfilled with imported fill and then contoured to the surrounding topography.

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

9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

9.1 Standard of Care

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

9.2 Limitations

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

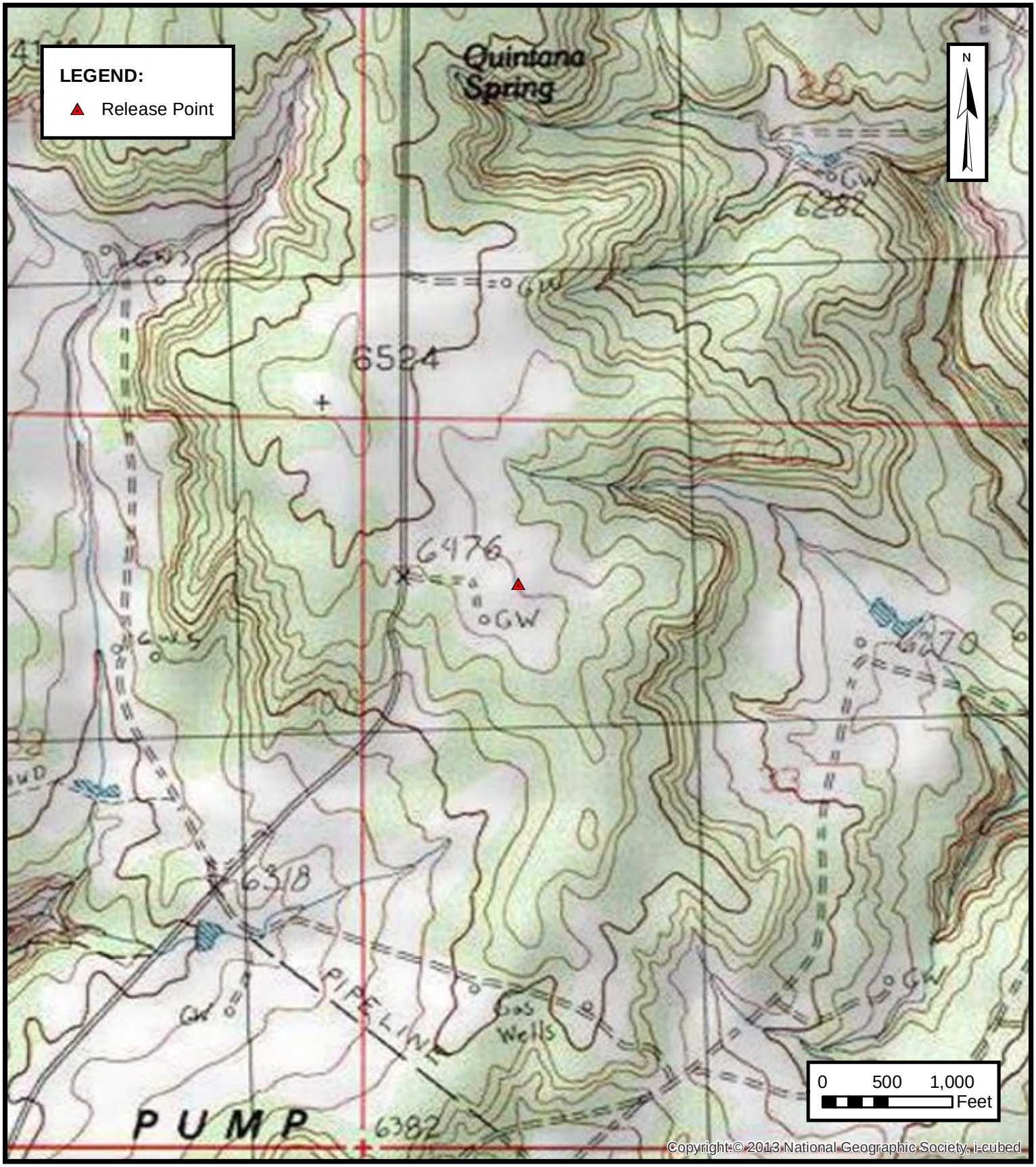
9.3 Reliance

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

ENSOLUM

APPENDIX A

Figures



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE
1

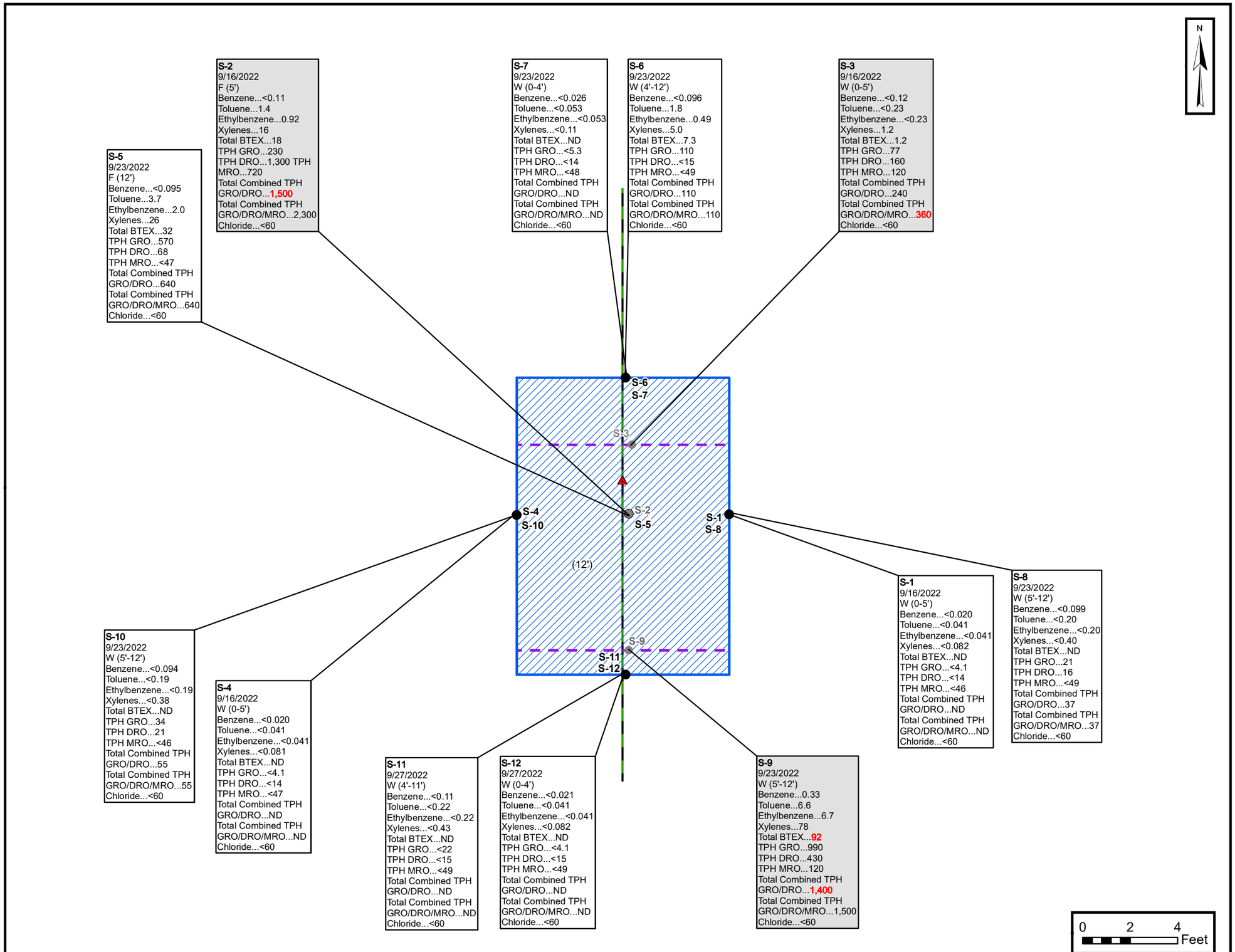
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE
2



LEGEND:

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

NOTES:
F - Floor Sample
W - Wall Sample

All Concentrations Are in mg/Kg.

Concentrations in **Red** Exceed the Applicable NM EMNRD OCD Closure Criteria.

All Depths Are Listed in Feet BGS.

Analytical Callouts in Gray Denote Sampling Location Removed by Excavation.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

SITE MAP WITH SOIL SAMPLE LOCATIONS

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)

Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

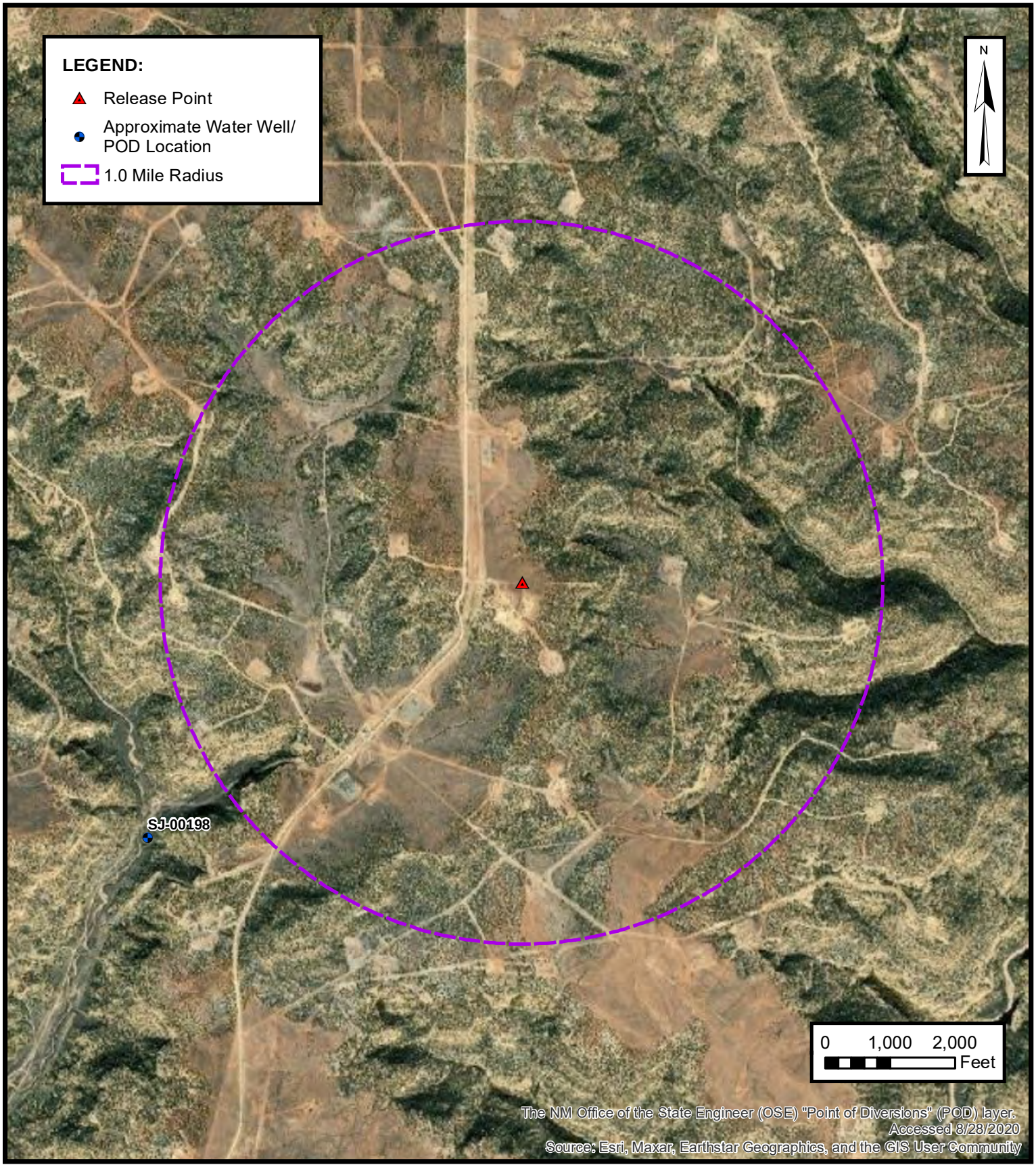
FIGURE
3

PROJECT NUMBER: 05A1226209

ENSOLUM

APPENDIX B

Siting Figures and Documentation



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

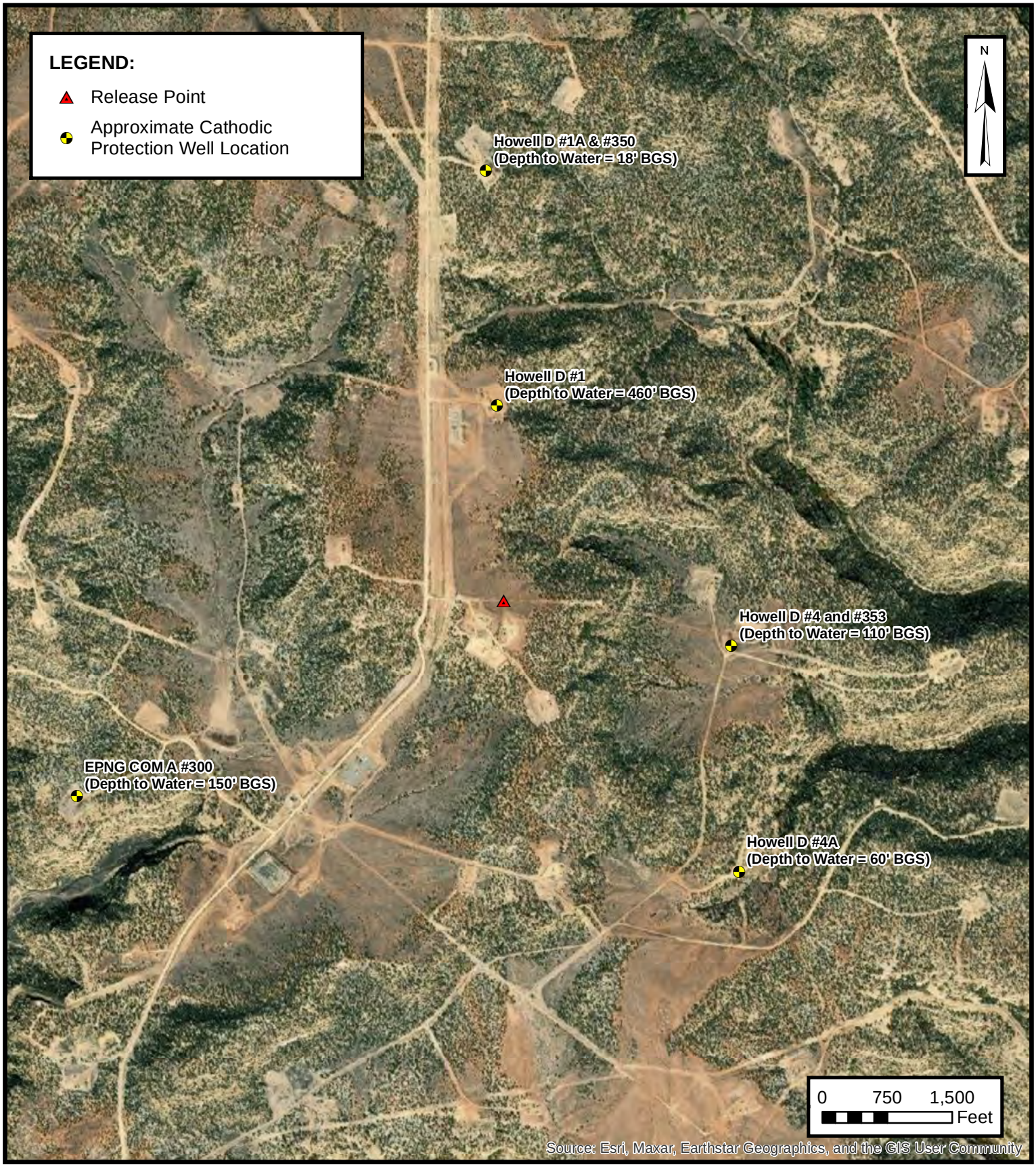
1.0 MILE RADIUS WATER WELL/ POD LOCATION MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE

A



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

CATHODIC PROTECTION WELL RECORDED DEPTH TO WATER

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE

B

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

300 FOOT RADIUS
WATERCOURSE AND DRAINAGE IDENTIFICATION
ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE
C

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

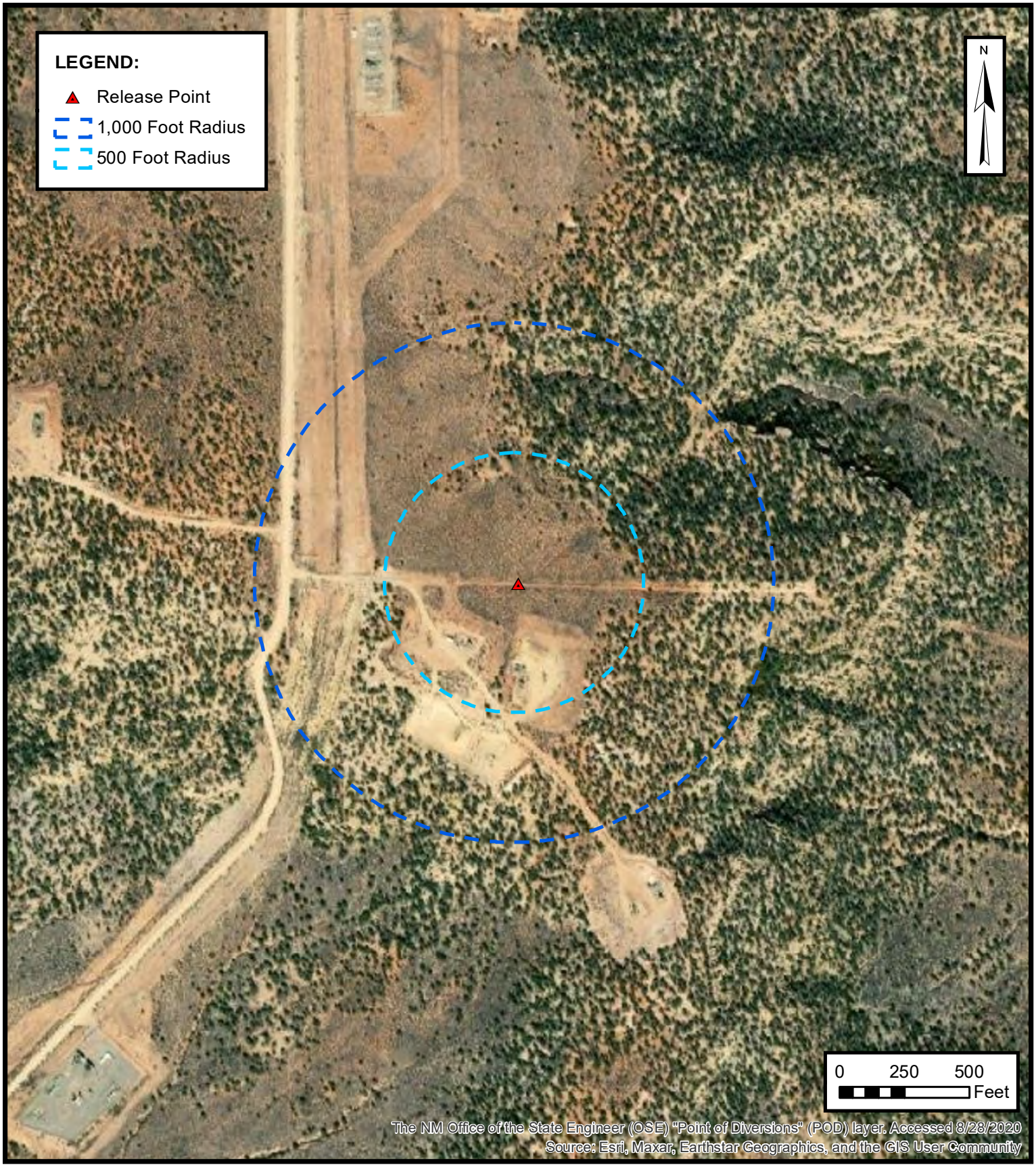
300 FOOT RADIUS
OCCUPIED STRUCTURE IDENTIFICATION

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE

D



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

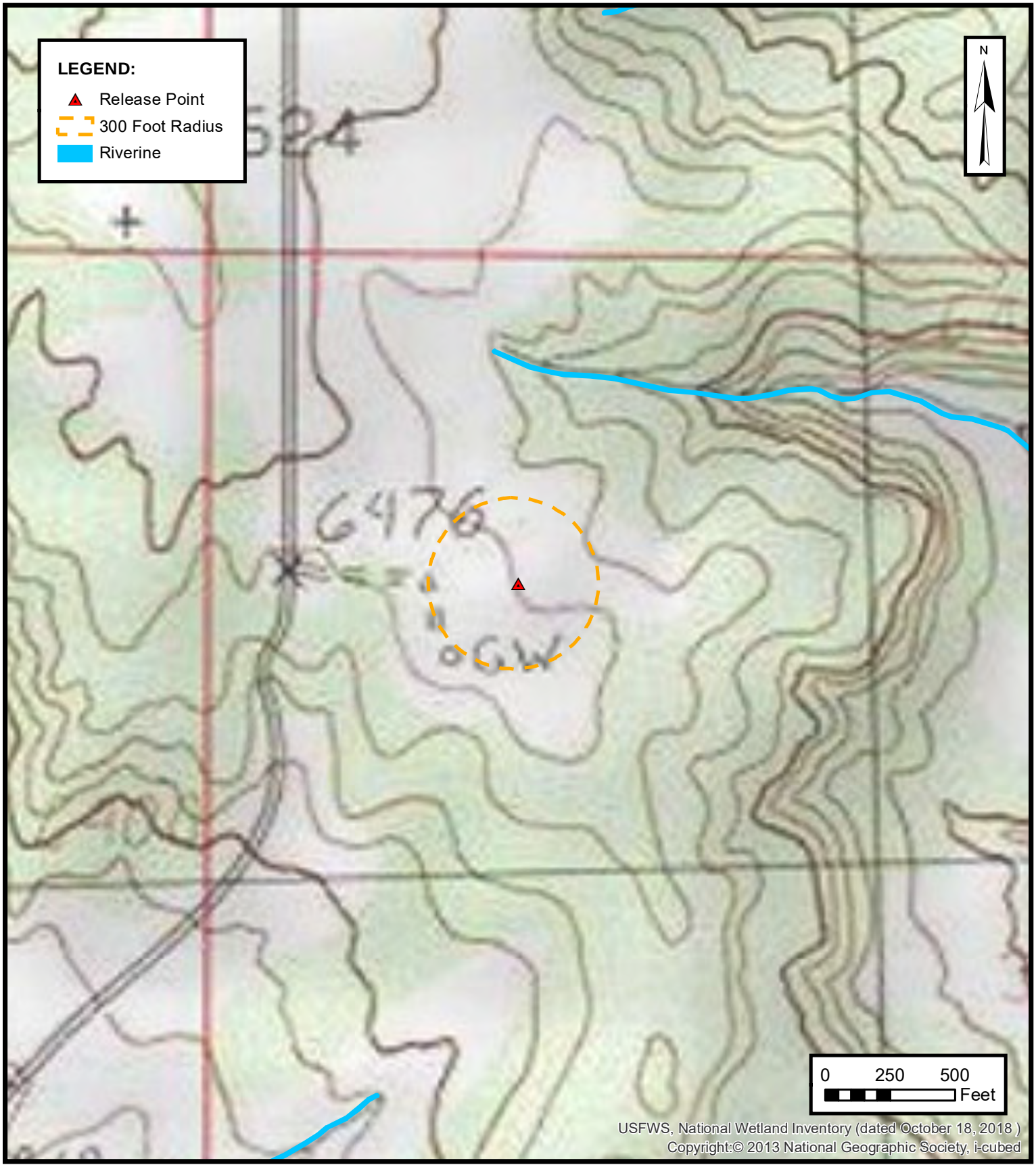
WATER WELL AND NATURAL SPRING LOCATION

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE

E



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

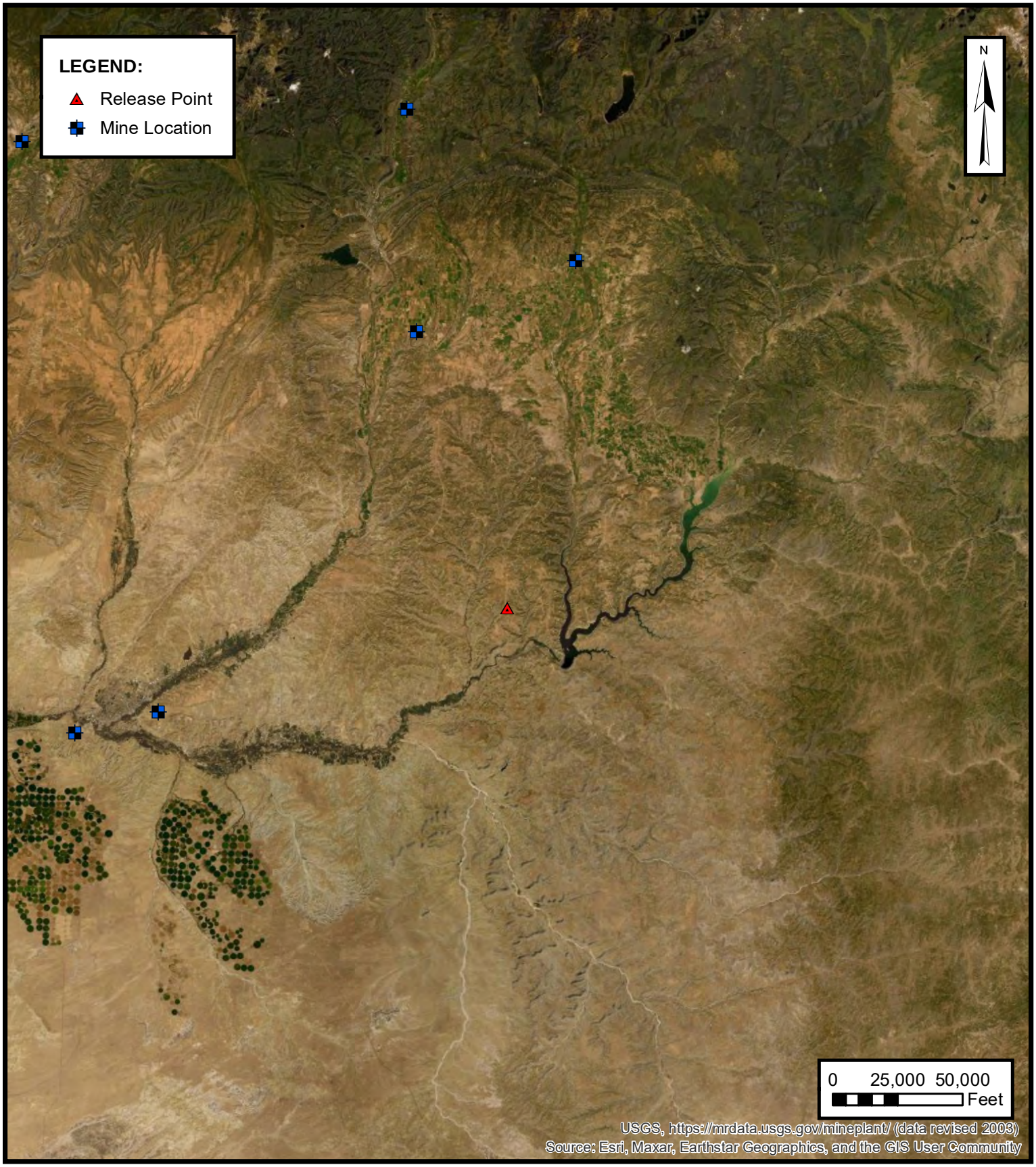
WETLANDS

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE

F



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

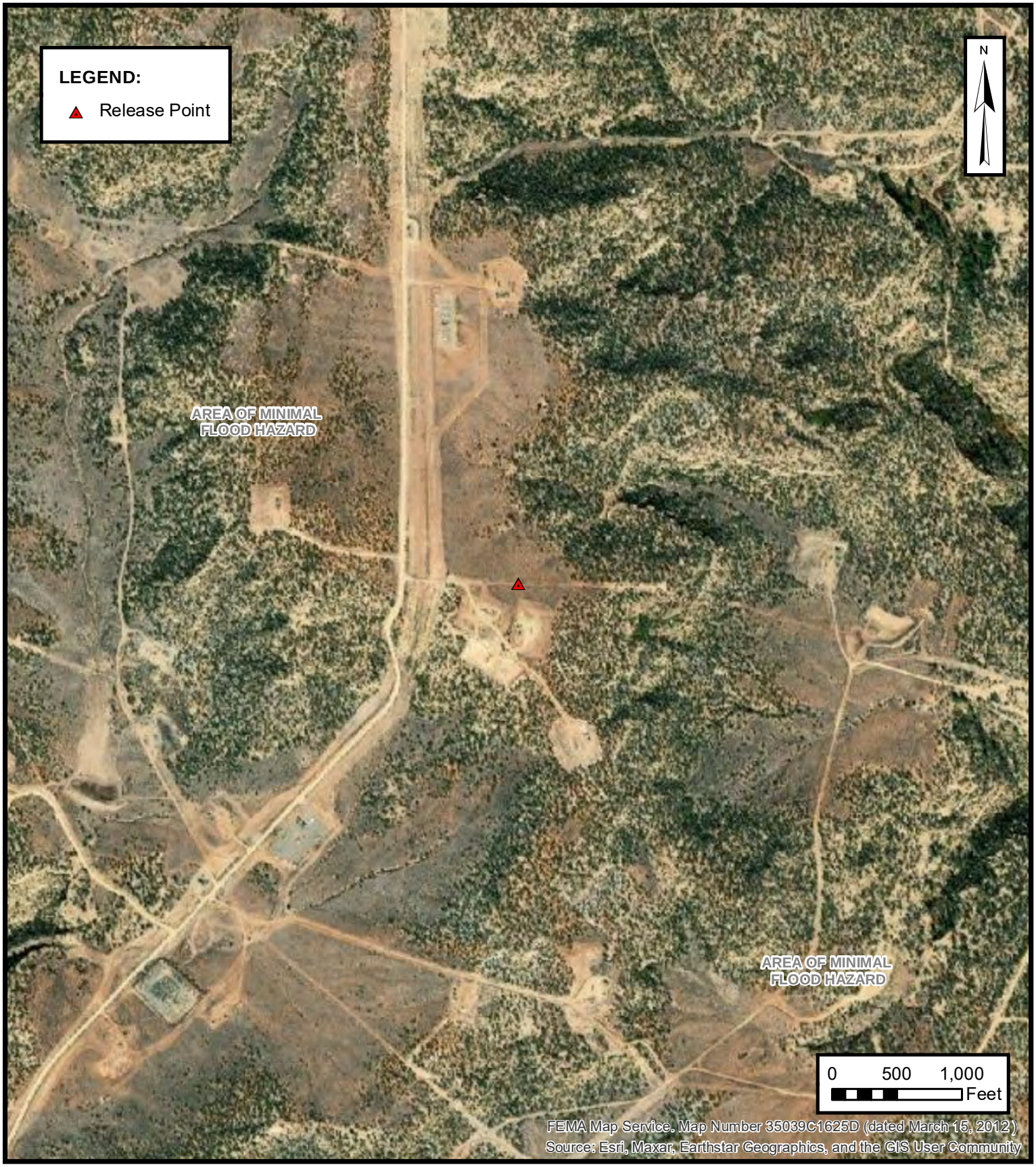
MINES, MILLS AND QUARRIES

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE

G



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

100-YEAR FLOOD PLAIN MAP

ENTERPRISE FIELD SERVICES, LLC
TRUNK E (09/21/22)
Unit Letter D, S33 T31N R8W, San Juan County, New Mexico
36.858328° N, 107.685634° W

PROJECT NUMBER: 05A1226209

FIGURE
H

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

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 00198	SJ	SJ	4	3	3	32	31N	08W	258895	4081451*	2003		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

PLSS Search:

Section(s): 33, 27, 28, 29, 32, 34 **Township:** 31N **Range:** 08W

***UTM location was derived from PLSS - see Help**

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

No records found.

PLSS Search:

Section(s): 3, 4, 5 **Township:** 30N **Range:** 08W

4 = 30-045-10139
353 = 30-045-26904

3500

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 B Sec. 33 Twp 31 Rng 8

Name of Well/Wells or Pipeline Serviced HOWELL D #4, #353

cps 2004w

Elevation 6272' Completion Date 9/29/88 Total Depth 360' 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. 110' NO SAMPLE

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 320', 310', 155', 185', 177', 169', 161', 154', ±46', 139'

Depths vent pipes placed: 356'

Vent pipe perforations: 260'

Remarks: gb #3

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.
WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Comp 10-3-95

Drilling Log (Attach Hereto) ☒ Completion Date 9-29-95

CPS #	Well Name, Line or Plant	Work Order #	State:	Ins. Union Check
2004W	Dowell D 33 #4	3102A		☐ Good ☒ Bad

Location	Anode Size:	Anode Type:	Size Bit:
B NE 33-31-8	9' 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
360'	356'				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	320	310	155	185	177	169	161	154	146	139
Anode Output (Amps)	3.1	2.9	2.5	2.7	3.0	3.9	4.8	43	4.0	2.7
Anode Depth	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Anode Output (Amps)	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.9	Amps 14.2	Ohms .83		

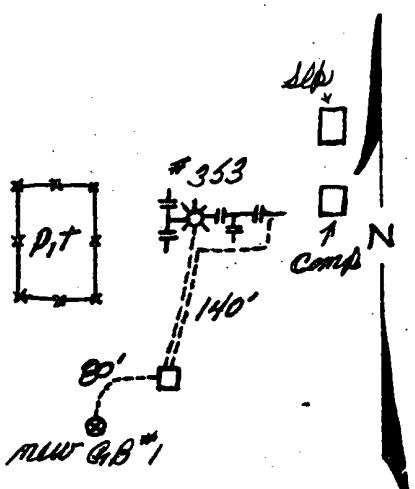
Remarks: Unable to run static test on well due to unsulated unions. Water was at 110', no sample. Installed 356' of 1" PVC vent pipe bottom 260' perforated.

QB 4074.00

Rectifier Size:	40 V 16 A	669.00
Addn'l Depth	0	
Depth Credit:	144' @ 3.50	- 504.00 ✓
Extra Cable:	170' @ .24	40.80 ✓
Ditch & 1 Cable:	220' @ .70	154.00 ✓
Ditch & 2 Cable:	0	
25' Meter Pole:	0	
20' Meter Pole:	0	
10' Stub Pole:	1 @ 158.50	158.50 ✓
Junction Box:	1 @ 225	225.00 ✓
		4817.30 ✓
tax		240.87 ✓
		5058.17 pd 95

All Construction Completed

Calvin Rodman
(Signature)



6272

CDS # 90040

Darrell Crass Drilling

Drill No. 3

Well No. Howell D #353 Date 9-29-88

Client Meridian Oil Co.

County San Juan State New Mexico

0-10	clay
10-90	Sandstone
90-100	Shale
100-110	Sand
110-140	Sandy Shale
140-190	Shale
190-240	Sandstone
240-290	Sandy Shale
290-300	Sandstone
300-330	Shale
330-360	Sandstone

Water @ 110'

43 4A-30-045-21769

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

Operator MERIDIAN OIL Location: Unit SE Sec 33 Twp 31 Rng 8

Name of Well/Wells or Pipeline Serviced HOWELL D #4A

cps 1001w

Elevation 6253' Completion Date 8/2/76 Total Depth 320' Land Type* N/A

Casing, Sizes, Types & Depths N/A

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

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

N/A

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

Fresh, Clear, Salty, Sulphur, Etc. 60'

Depths gas encountered: N/A

Type & amount of coke breeze used: 36 SACKS

Depths anodes placed: 280',270',260', 245', 235', 195', 185', 170', 160', 15

Depths vent pipes placed: N/A

Vent pipe perforations: 220'

Remarks: gb #1

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

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

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

Form: -238 (Rev. 1-69)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐

Completion Date 8-2-76

Well Name Howell D#4A				Location SE 33-31-8				CPS No. 1001	
Type & Size Bit Used 6 3/4								Work Order No. 57044	
Anode Hole Depth Log 320		Total Drilling Rig Time		Total Lbs. Coke Used 36		Lost Circulation Mat'l Used		No. Sacks Mud Used	
Anode Depth # 1 280	# 2 270	# 3 260	# 4 245	# 5 235	# 6 195	# 7 185	# 8 170	# 9 160	# 10 150
Anode Output (Amps) # 1 2.3	# 2 3.1	# 3 3.4	# 4 2.1	# 5 2.6	# 6 2.4	# 7 2.7	# 8 3.4	# 9 4.6	# 10 5.2
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 Volts 12.2	Amps 13.2	Ohms 0.92			No. 8 C.P. Cable Used			No. 2 C.P. Cable Used	

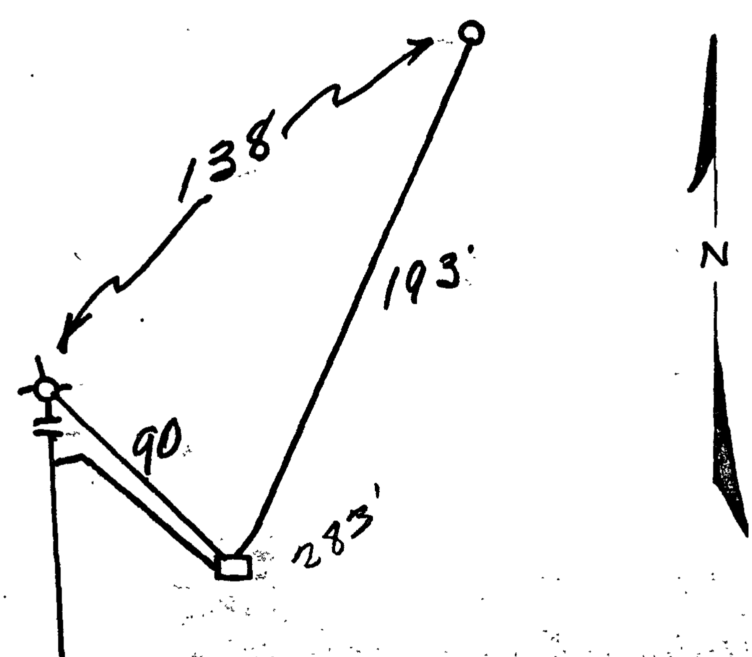
Remarks: Driller Said Blew out at 60' Start Water injection
Drill to 320'. Water Next A.M. at 300' - Could Hear Water
Falling - Driller Said Water Coming From 60'
Fill to 60' & Log to 320'
Vent Perforated 220'
Slurry 36 Coke

All Construction Completed

Daniels
(Signature)

2248.50
(90.00) [illegible]
77.82 Cable
120.00 Anode
94.60 Lead wire
2500.92
100.04 Tax
2600.96
213.40 [illegible]
336.00 Cable
194.50 [illegible]
3344.86

GROUND BED LAYOUT SKETCH



Original & 1 Copy All Reports

DRILLING DEPARTMENT

DAILY DRILLING REPORT

LEASE Howell D WELL NO. CPS #1001 #4A CONTRACTOR Morrow RIG NO. 38 REPORT NO. DATE 8/2 19 26

MORNING

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
0	90	Sand		
Injected at 60 (water)				
90	100	Shale		
100	120	Sand		

BIT NO. NO. DC SIZE LENG.

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD			MUD, ADDITIVES USED AND RECEIVED
Time	Wt.	Vis.	

FROM	TO	TIME BREAKDOWN

REMARKS –

DAYLIGHT

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
120	150	Shale		
150	170	Sand		
170	190	Shale		
190	220	Sand		

BIT NO. NO. DC SIZE LENG.

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD			MUD, ADDITIVES USED AND RECEIVED
Time	Wt.	Vis.	

FROM	TO	TIME BREAKDOWN

REMARKS –

EVENING

Driller Total Men In Crew

FROM	TO	FORMATION	WT-BIT	R.P.M.
220	240	Shale		
240	250	Sand		
250	270	Shale		
270	320	Sand		

BIT NO. NO. DC SIZE LENG.

SERIAL NO. STANDS

SIZE SINGLES

TYPE DOWN ON KELLY

MAKE TOTAL DEPTH

MUD RECORD			MUD, ADDITIVES USED AND RECEIVED
Time	Wt.	Vis.	
Hole logged at 320			

FROM	TO	TIME BREAKDOWN

REMARKS –

SIGNED: Toolpusher _____ Company Supervisor _____

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet: ___ of ___
Date: ___
By: ___
File: ___

MW		gals/mol
16.04	C_1	6.4
30.07	C_2	10.12
44.10	C_3	10.42
58.12	iC_4	12.38
58.12	nC_4	11.93
72.15	iC_5	13.85
72.15	nC_5	13.71
86.18	iC_6	15.50
86.18	C_6	15.57
100.21	iC_7	17.2
100.21	C_7	17.46
114.23	C_8	19.39
28.05	$C_2^=$	9.64
42.08	$C_3^=$	9.67

MW	MISC.	gals/mol
32.00	O_2	3.37
28.01	CO	4.19
44.01	CO_2	6.38
64.06	SO_2	5.50
34.08	H_2S	5.17
28.01	N_2	4.16
2.02	H_2	3.38

Howell D 4A 1001W

60	.4	85	1.0
	.2	90	.8
70	.2		.6
	.6	300	.6
80	.3		.6
	.2	10	.6
90	.3		.6
	.6	20	
100	.5		
	.6	30	
10	.4		
	.3	40	
20	.2		
	.2	50	
30	.2		
	.4	60	
40	.3		
	.4		
50	1.5		
	1.9		
60	2.0		
	2.0		
70	1.4		
	1.0		
80	.7		
	1.3		
90	1.6		
	.13		
200	.6		
	.4		
10	.4		
	.4		
20	.4		
	.6		
30	.8		
	1.2		
40	1.8		
	1.5		
50	.9		
	.6		
60	1.0		
	1.8		
70	2.0		
	1.8		
80	1.4		

Driller Said Blew Water out at 60' - Starting. Drill to 320
Water Next A.M. at 300'
Could Hear Water Falling - Driller Said Coming From 60'
Fill to 60 & Log

Vent Perf 220

36 Coke

1	280	1.4	2.3
2	270	2.2	3.1
3	260	2.2	3.4
4	245	1.4	2.1
5	235	1.6	2.6
6	195	1.4	2.4
7	185	2.0	2.7
8	170	1.4	3.4
9	160	2.2	4.6
10	150	2.3	5.0

92
132) 12.20V   13.2A = 0.92
1188
320
264
56

30-045-10250

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

Operator MERIDIAN OIL Location: Unit SW Sec. 28 Twp 31 Rng 8

Name of Well/Wells or Pipeline Serviced HOWELL D #1

cps 247w

Elevation 6483' Completion Date 6/20/74 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. 460'

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

Depths gas encountered: N/A

Type & amount of coke breeze used: 12700 lbs.

Depths anodes placed: 660', 650', 640', 630', 620', 495', 485', 475', 465', 455'

Depths vent pipes placed: N/A

Vent pipe perforations: 495'

Remarks: gb #3 FIRST HOLE CAVED AT 430'. LOST LOGGING ANODE AT 600'.

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.

El Paso Natural Gas Company
Form 7-238 (Rev. 1-69)

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Logged

Drilling Log (Attach Hereto). ☐

Completion Date 6/20/74

Well Name	Location	CPS No.
Howell D #1	SW 28-31N-8W	247 W

Type & Size Bit Used	Work Order No.
6 3/4"	184-52020.19.50

Anode Hole Depth	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
700'		12,700 Est.		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	660	650	640	630	620	495	485	475	465	455
Anode Output (Amps)	1.5	1.9	2.6	2.6	2.4	1.9	2.4	2.4	2.0	2.0

	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Anode Depth	445	420								
Anode Output (Amps)	2.0	2.0								

Total Circuit Resistance			No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
Volts 11.5	Amps 10.0	Ohms 1.15	385'	

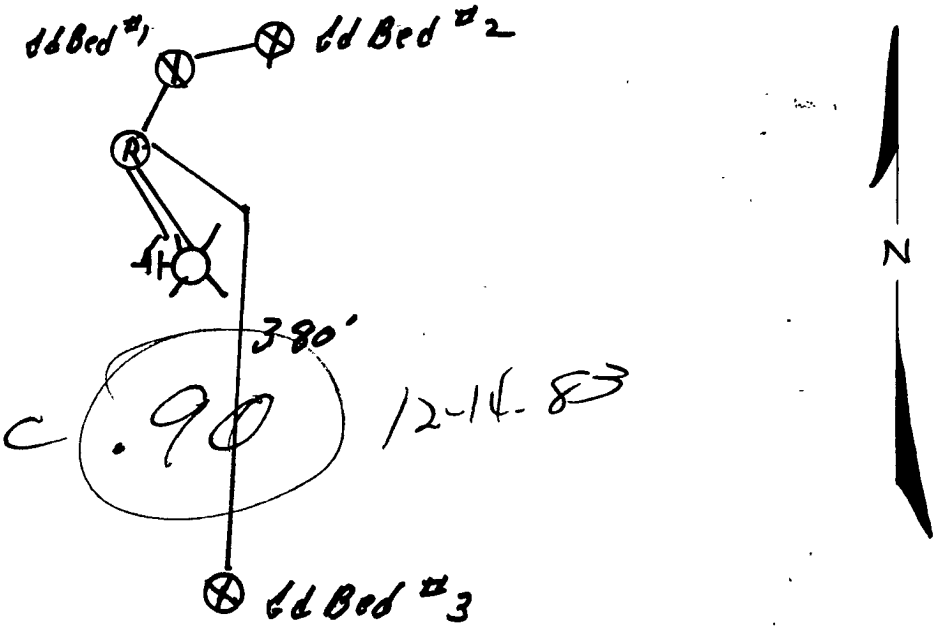
Remarks: Hole #1 Drilled With Air Driller Said Water @ 360 Increase @ 460'-480' Lost Loggin Anode in Hole. Hole Caved Moved Rig 20' Drill With Mud To 700'. Vent Hose Perfor 495'. 320' Drill pipe stuck in Hole Freed With Diesel and Mg Cobar Pipe Lax Chemical Additive

All Construction Completed

Edward R. Pavlek
(Signature)

$ 3,409.00
154.00 Cable
$ 3,563.00
+ 1,387.50 Extra Depth
$ 4,950.50
180.00 Extra Anodes
$ 5,130.50
205.22 TAX
$ 5,335.72

GROUND BED LAYOUT SKETCH



New Static .90 12-14-83

STORM WATER WELL DRILLING INC.

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
WATER WELL DRILLING

CONTRACTORS
14991 W. 44TH AVENUE
GOLDEN, COLORADO 80401
PHONE (303) 278-9505

GENERAL OFFICE
14991 W. 44TH AVENUE
BAILEY OFFICE
CALL 1-838-4821

Drill GD 45 W Date 6-20-74

Owner C.P.S 247 W

Location City Farmington State N. M County

From	To	Formation	Color	Hardness
0	20	Surface	Br	Soft
20	60	Sandstone	Br	Hard
60	190	Shale	BL	Hard
190	230	Sandy Shale	BL	Med
230	260	Sandy Shale	BL	Med
260	295	Sandstone	Br	Hard
295	440	Sandy Shale	BL	Med
440	620	Sand & Gravel	Br	Soft
620	700	Sandy Shale	BL	Hard
		Injection at 360		
		Water at 460		

Total Hours

Equipment Down Time

Hours Drilling

Driller Art Gladwell

Helper Dale Bates

Helper Doug Reider

C.P.S. Time

S.W.W.D.I. Time

Total Footage

Approval of
C.P.S. Engineer

EL PASO NATURAL GAS COMPANY

ENGINEERING DEPARTMENT

Date: ______

By: ______

384

12,700 JK

247 W   X = 26.2

MW		gals/mol
16	C_1	6.4
30	C_2	9.56
44	C_3	10.42
58	IC_4	12.38
"	NC_4	11.93
72	IC_5	13.85
"	NC_5	13.71
86	IC_6	15.50
"	C_6	15.57
100	IC_7	17.2
"	C_7	17.46
114	C_8	19.38
28	$C_2^=$	9.64
42	$C_3^=$	9.67

MISC. MW		gals/mol
44	CO_2	6.38
34	H_2S	5.17
28	N_2	4.16
2	H_2	3.38

400	Hole Dia. [illegible]	.3	80	.4	.4	6/18	Driller said water 360'
		.3		.4	.4		Injection @ 360'
10		.2	90	.4	.4		Increase 460'-480'
		.5	596'	.4	.4		Drill to 460 stand
(12) 20		1.3	600		.4 .4		over night water
		1.0			.4 .4		standing @ 250'
30		.8	10		.3		Driller said 10 gal/min
	.1	.5					Drill to 600' attempt to
40	.3	.4					log lost logging anode
(11)	.4	1.1					in hole replaced logging
50	.3	1.3					anode and attempt to
(10)	.2	1.2	360	1.1			relog hole caved @ 430'
60	.3	.7		.3		6/19	moved rig 20' and drill
(9)	.3	.9	70	.2			with mud stuck 320'
70	.3	1.1		.2			drill pipe in hole freed
(8)	.2	1.2	80	.3			with diesel and Magcobar
80	.4	1.2		.4			pipe lax chemical addit.
(7)	.4	1.3	90	.4		6/20	Drill to 620 and log not
90	.6	1.3		.3			enough vent hose per 1/95?
(6)	.1	1.3					Water / Coke
500	.1	.3	610	.3	1	660	1.0 / 1.5
	.1	.2		.4	2	650	1.3 / 1.9
10	.2	.2	(5) 620	1.1	3	640	1.5 / 2.6
	.2	.2		1.3	4	630	1.5 / 2.6
20	.6	.2	(4) 630	1.4	5	620	1.5 / 2.4
	.3	.8		1.4	6	495	1.2 / 1.9
30	.2	.4	(3) 640	1.3	7	485	1.5 / 2.4
	.2	.2		1.3	8	475	1.5 / 2.4
40	.2	.2	(2) 650	1.3	9	465	1.2 / 2.0
	.3	.3		1.2	10	455	1.2 / 2.0
50	.3	.3	(1) 660	.9	11	445	1.3 / 2.0
	.3	.4		.9	12	420	1.4 / 2.0
60	.4	.4	670	.7			
	.4	.4		.5			11.5V 10A 1.15 Ω
70	.5	.6	680	.4			
	.5	.5		.5			
			690	.8			
			698	BOT			

1A-30-045-21776
350 - 30-045-26921

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

Operator MERIDIAN OIL Location: Unit E Sec. 28 Twp 31 Rng 8

Name of Well/Wells or Pipeline Serviced HOWELL D #1A, #350

cps 995w

Elevation 6520' Completion Date 9/27/88 Total Depth 520' 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. 18'

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 485', 475', 467', 460', 452', 365', 358', 350', 230', 220'

Depths vent pipes placed: 515'

Vent pipe perforations: 515'

Remarks: gb #2

RECEIVED
MAY 31 1991
OIL CON. DIV.
DIST.

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.
WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Comp 9-28-88

Drilling Log (Attach Hereto) ☒ Completion Date 9-27-88

CPS #	Well Name, Line or Plant:	Work Order #	Status:	Ins. Union Check
995 2002W	Howell D #350	3110A		☐ Good ☒ Bad

Location	Anode Size:	Anode Type:	Size Bit:
M 28-31-8	2" x 60"	Diamond	6 3/4

Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
520'	515'				

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Anode Depth	485	475	467	460	452	365	358	350	230	220
Anode Output (Amps)	3.2	3.3	3.3	2.4	2.1	3.0	3.4	3.2	2.1	2.2
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 11.9	Amps 12.3	Ohms .96		

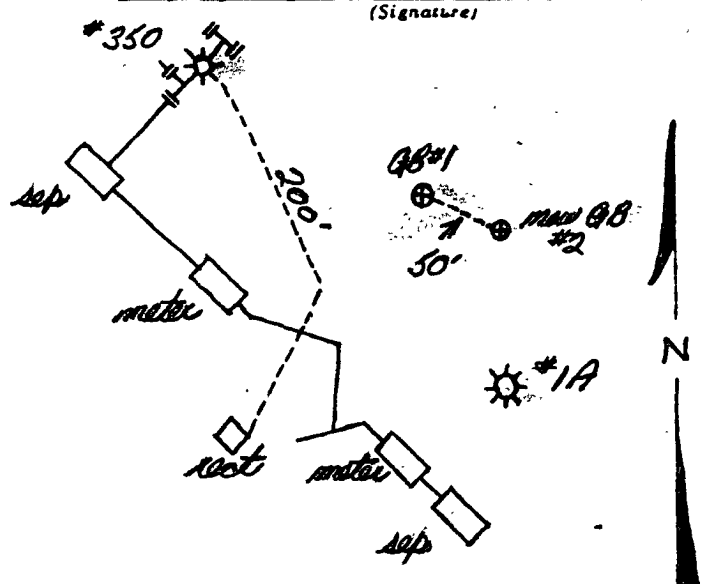
Remarks: Unable to run static test due to uninsulated unions. Water was at 18', sample taken, 20' hole was drilled to check water level. Installed 515' of 1" PVC with 515' perforated

GB 4074.00

Rectifier Size:	V A	
Addn'l Depth	15' @ 7.00	105.00
Depth Credit:	0	
Extra Cable:	20' @ .24	4.80
Ditch & 1 Cable:	250' @ .70	175.00
Ditch & 2 Cable:	0	
25' Meter Pole:	0	
20' Meter Pole:	0	
10' Stub Pole:	0	
Junction Box:	1 @ 225.00	225.00
		4583.60
tax		229.19
		4812.99

All Construction Completed

Calvin Rodman
(Signature)



6520

CRS # 2002W

Darrell Crass Drilling

Well No. Howell D #350 Date 9-27-88

Client Meridian Oil Co.

County San Juan State New Mexico

0-20	Sand
20-50	Sandstone
50-60	Shale
60-95	Sandstone
95-105	Shale
105-175	Sandstone
175-195	Shale
195-215	Sandstone
215-235	Shale
235-345	Sandstone
345-370	Shale
370-450	Sandstone
450-490	Shale
490-520	Sandstone

Water @ 18'

300-30-045-26877

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

Operator MERIDIAN OIL Location: Unit K Sec. 32 Twp 31 Rng 8

Name of Well/Wells or Pipeline Serviced EPNG Com A #300

Elevation 6269 Completion Date 7-31-91 Total Depth 504' Land Type F

Casing Strings, Sizes, Types & Depths 8" PVC 100' DEEP

If Casing Strings are cemented, show amounts & types used 24 SACKS NEAT CEMENT

If Cement or Bentonite Plugs have been placed, show depths & amounts used NO

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. Fresh 150

Depths gas encountered: NO

Ground bed depth with type & amount of coke breeze used: 504' with 150 (50lbs) bags Asbury 4518 Flo Coke

Depths anodes placed: 489, 481, 473, 465, 457, 449, 441, 410, 400, 390, 380, 340

Depths vent pipes placed: 504

Vent pipe perforations: 100' TO BOTTOM

Remarks:

RECEIVED
FEB 24 1992
OIL CON. DIV.
DIST. 3

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

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

CPS GROUND BED CONSTRUCTION WORKSHEET

CPS# 2174.a	P/L NAME(s), NUMBER(s) EDNG Com A #300					
) # I220	TOTAL	VOLTS 11.62	AMPS 19 1	- OHMS .61	DATE 7-31-91	NAME MRcl

REMARKS (notes for construction log) 100' 8" Surface Casing 24 SACKS CEMENT Drilled 505 TD 504 509' 1" PVC perforated bottom 400

DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #	DEPTH	LOG ANODE	ANODE #
100			295	.8		490	3.0		685		
105			300	.9		495	2.6		690		
110			305	1.1		500	2.6		695		
115			310	1.2		505	504		700		
120			315	1.2		510			ANODE #	DEPTH	NO COKE
125			320	1.2		515					
130			325	1.3		520			1	489	2.8
135			330	1.5		525		481	2	480	3.5
140			335	1.9		530		473	3	471	4.0
145			340	2.3		535		465	4	462	3.9
150			345	1.9		540		457	5		3.6
155			350	1.6		545		449	6		3.9
160			355	1.6		550		441	7		2.5
65			360	1.7		555			8	416	1.7
170			365	1.7		560			9	400	1.9
175			370	1.9		565			10	390	2.2
180			375	2.2		570			11	380	2.4
185			380	2.5		575			12	340	2.2
190			385	2.3		580			13		
195			390	2.3		585			14		
200			395	2.3		590			15		
205	.0		400	2.0		595			16		
210	1.3		405	1.8		600			17		
215	1.4		410	1.9		605			18		
220	1.5		415	1.7		610			19		
225	1.3		420	1.5		615			20		
230	.9		425	1.3		620			21		
235	.9		430	1.2		625			22		
240	.7		435	1.1		630			23		
245	.5		440	1.0		635			24		
250	.4		445	3.2		640			25		
255	.4		450	4.0		645			26		
260	.5		455	4.0		650			27		
265	.5		460	3.9		655			28		
270	.4		465	4.0		660			29		
275	.4		470	4.0		665			30		
280	.6		475	4.2		670					
285	.6		480	4.0		675					
90	.6		485	3.4		680					

FULL COKE
5.5
6.5
6.9
6.3
6.1
5.6
4.3
3.7
6.5
4.8
4.7
4.3

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

API WATER ANALYSIS REPORT FORM

Laboratory No. 25910801-1E 21740

Company		Sample No.	Date Sampled
MERIDIAN OIL			7/31/91
Field	**Legal Description**	**County or Parish**	**State**
	K 32-31-8	SAN JUAN	N.M.
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
	EPNG COM A #300	150'	FC	
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**
GROUND BED		MTRW

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

DISSOLVED SOLIDS

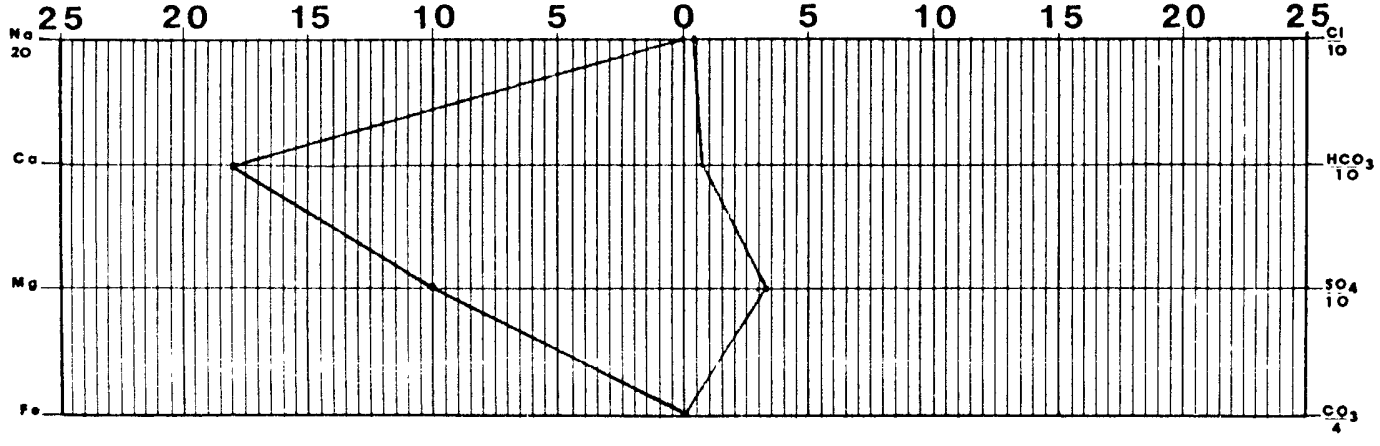
CATIONS	mg/l	me/l
Sodium, Na (calc)	390	1.7
Calcium, Ca	360	18
Magnesium, Mg	120	10
Barium, Ba		

ANIONS		
Chloride, Cl	150	4.2
Sulfate, So_4	1600	33
Carbonate, CO_3	0	0
Bicarbonate, HCO_3	480	7.9

OTHER PROPERTIES

pH	7.2
Specific Gravity, 60/60 F.	1.0047
Resistivity (ohm-meters) 63° F.	3.85
Total Dissolved Solids (calc.)	3100.
Iron, Fe (total)	
Sulfide, as H_2S	

REMARKS & RECOMMENDATIONS:



Date Received	Preserved	Date Analyzed	Analyzed By
08/01/91	NO	08/03/91	

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

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

2. Originating Site:
Trunk E

3. Location of Material (Street Address, City, State or ULSTR):
UL D Section 33 T31N R8W; 36.858328, -107.685634

Sept 2022

4. Source and Description of Waste:
Source: Remediation activities associated with a natural gas pipeline leak.
Description: Hydrocarbon/Condensate impacted soil associated natural gas pipeline release.
Estimated Volume 50 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 152/115 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) 9-13-2022, representative for Enterprise Products Operating authorizes Envirotech, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

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

5. Transporter: TBD

OCD Permitted Surface Waste Management Facility

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

Waste Acceptance Status:

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

PRINT NAME: Greg Crabtree TITLE: Enviro Manager DATE: 9/15/22
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
Trunk E (09/21/22)
Ensolum Project No. 05A1226209

ENSOLUM

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

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Trunk E (09/21/22)
Ensolum Project No. 05A1226209

ENSOLUM

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

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Trunk E (09/21/22)
Ensolum Project No. 05A1226209

ENSOLUM

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

ENSOLUM

APPENDIX E

Regulatory Correspondence

From: Kyle Summers
To: Landon Daniell
Cc: Ranee Deechilly
Subject: FW: [EXTERNAL] FW: Trunk E - UL D Section 33 T31N R8W; 36.858328, -107.685634; Incident #nAPP2226445914
Date: Monday, September 26, 2022 4:01:16 PM
Attachments: image003.png
image004.png
image005.png

Kyle Summers
Principal
903-821-5603
Ensolum, LLC

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Monday, September 26, 2022 3:38 PM
To: Long, Thomas <tjlong@eprod.com>; Ryan Joyner <rjoyner@blm.gov>
Cc: Kyle Summers <ksummers@ensolum.com>; Stone, Brian <bmstone@eprod.com>
Subject: RE: [EXTERNAL] FW: Trunk E - UL D Section 33 T31N R8W; 36.858328, -107.685634; Incident #nAPP2226445914

[**EXTERNAL EMAIL**]

Tom,

Thank you for the notice. Your variance request per 19.15.29.12D (1a) NMAC is approved by OCD.

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

Office Hrs.:
7:00am – 12:00pm & 1:00 – 3:30 pm Mon.–Thur.
7:00am – 12:00pm & 1:00 – 4:00 pm Fri.

From: Long, Thomas <tjlong@eprod.com>
Sent: Monday, September 26, 2022 3:03 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Ryan Joyner <rjoyner@blm.gov>
Cc: Kyle Summers <ksummers@ensolum.com>; Stone, Brian <bmstone@eprod.com>
Subject: RE: [EXTERNAL] FW: Trunk E - UL D Section 33 T31N R8W; 36.858328, -107.685634; Incident #nAPP2226445914

Nelson/Ryan,

This email is also a sample notification and variance request. We had one sample that did not pass. Enterprise is requesting a variance for required 48 hour notification per 19.15.29.12D (1a) NMAC. Enterprise would like to collect the closure sample tomorrow September 27, 2022 at 12:00 p.m. at the Trunk E 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

Enterprise Products

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Friday, September 23, 2022 8:20 AM
To: Long, Thomas <tjlong@eprod.com>
Subject: RE: [EXTERNAL] FW: Trunk E - UL D Section 33 T31N R8W; 36.858328, -107.685634; Incident #nAPP2226445914

[Use caution with links/attachments]
Good morning Tom,

Thank you for the notice. Your variance request 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.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals

and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards

Nelson Velez ● Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov

Office Hrs.:
7:00am – 12:00pm & 1:00 – 3:30 pm Mon.-Thur.
7:00am – 12:00pm & 1:00 – 4:00 pm Fri.

From: Long, Thomas <tjlong@eprod.com>
Sent: Friday, September 23, 2022 8:17 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: RE: [EXTERNAL] FW: Trunk E - UL D Section 33 T31N R8W; 36.858328, -107.685634; Incident #nAPP2226445914

Nelson,

Are we good to sample today? We did not yesterday due to the weather. Please see below.

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

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Thursday, September 22, 2022 7:42 AM
To: Long, Thomas <tjlong@eprod.com>
Subject: RE: [EXTERNAL] FW: Trunk E - UL D Section 33 T31N R8W; 36.858328, -107.685634; Incident #nAPP2226445914

[Use caution with links/attachments]
I did receive. Old email address automatically transmitted to the new domain. Thanks for checking. Have a good day.

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

Office Hrs.:
7:00am – 12:00pm & 1:00 – 3:30 pm Mon.–Thur.
7:00am – 12:00pm & 1:00 – 4:00 pm Fri.

From: Long, Thomas <tjlong@eprod.com>
Sent: Thursday, September 22, 2022 7:31 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: [EXTERNAL] FW: Trunk E - UL D Section 33 T31N R8W; 36.858328, -107.685634; Incident #nAPP2226445914

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

Nelson,

I am not sure you got this email as that I sent to your old email address. Please see below.

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

From: Long, Thomas
Sent: Wednesday, September 21, 2022 1:00 PM
To: 'Velez, Nelson, EMNRD' <Nelson.Velez@state.nm.us>; Ryan Joyner <rjoyner@blm.gov>
Cc: Stone, Brian <bmstone@eprod.com>; Kyle Summers <ksummers@ensolum.com>
Subject: Trunk E - UL D Section 33 T31N R8W; 36.858328, -107.685634; Incident #nAPP2226445914

Nelson/Ryan,

This email is a notification that Enterprise had a release of natural gas and condensate on the Trunk E pipeline on September 10, 2022. The pipeline was isolated, depressurized, locked and tagged out. No liquids were observed on the ground surface. No water ways were affected. No injuries nor fire resulted from the release. Remediation and repairs began last Friday and Enterprise determined this reportable per NOMCOD regulation due to the volume of impacted subsurface soil on September 21, 2022.

Enterprise collected some soil samples on Friday, September 16, 2022 as delineation samples and would like to use the samples that passed as closure samples.

This email is also 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 September 22, 2022 at 10:00 a.m. at the Trunk E 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
Trunk E (09/21/22)
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)[1] (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 & Tier II)				10	NE	NE	NE	50	NE	NE	NE	Tier II - 1,000	Tier I (<4 feet) - 100 Tier II - 2,500	Tier I (<4 feet) - 600 Tier II - 10,000
Composite Soil Samples Removed by Excavation and Transported to the Landfarm for Disposal/Remediation														
S-2	9.16.22	C	5	<0.11	1.4	0.92	16	18	230	1,300	720	**1,500**	2,300	<60
S-3	9.16.22	C	0 to 5	<0.12	<0.23	<0.23	1.2	1.2	77	160	120	240	**360**	<60
S-9	9.23.22	C	5 to 12	0.33	6.6	6.7	78	**92**	990	430	120	**1,400**	1,500	<60
Excavation Composite Soil Samples														
S-1	9.16.22	C	0 to 5	<0.020	<0.041	<0.041	<0.082	ND	<4.1	<14	<46	ND	ND	<60
S-4	9.16.22	C	0 to 5	<0.020	<0.041	<0.041	<0.081	ND	<4.1	<14	<47	ND	ND	<60
S-5	9.23.22	C	12	<0.095	3.7	2.0	26	32	570	68	<47	640	640	<60
S-6	9.23.22	C	4 to 12	<0.096	1.8	0.49	5.0	7.3	110	<15	<49	110	110	<60
S-7	9.23.22	C	0 to 4	<0.026	<0.053	<0.053	<0.11	ND	<5.3	<14	<48	ND	ND	<60
S-8	9.23.22	C	5 to 12	<0.099	<0.20	<0.20	<0.40	ND	21	16	<49	37	37	<60
S-10	9.23.22	C	5 to 12	<0.094	<0.19	<0.19	<0.38	ND	34	21	<46	55	55	<60
S-11	9.27.22	C	4 to 11	<0.11	<0.22	<0.22	<0.43	ND	<22	<15	<49	ND	ND	<60
S-12	9.27.22	C	0 to 4	<0.021	<0.041	<0.041	<0.082	ND	<4.1	<15	<49	ND	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

September 21, 2022

Kyle Summers

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

RE: Trunk E OrderNo.: 2209880

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/17/2022 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 **2209880**
Date Reported: **9/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-1
Project: Trunk E
Collection Date: 9/16/2022 1:00:00 PM
Lab ID: 2209880-001 **Matrix:** SOIL **Received Date:** 9/17/2022 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	9/19/2022 11:13:39 AM	70254
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/19/2022 10:38:14 AM	70248
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/19/2022 10:38:14 AM	70248
Surr: DNOP	91.6	21-129		%Rec	1	9/19/2022 10:38:14 AM	70248
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/19/2022 9:02:29 AM	70234
Surr: BFB	106	37.7-212		%Rec	1	9/19/2022 9:02:29 AM	70234
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	9/19/2022 9:02:29 AM	70234
Toluene	ND	0.041		mg/Kg	1	9/19/2022 9:02:29 AM	70234
Ethylbenzene	ND	0.041		mg/Kg	1	9/19/2022 9:02:29 AM	70234
Xylenes, Total	ND	0.082		mg/Kg	1	9/19/2022 9:02:29 AM	70234
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	9/19/2022 9:02:29 AM	70234

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	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 range due to dilution or matrix interference		

Analytical Report
Lab Order **2209880**
Date Reported: **9/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-2
Project: Trunk E
Collection Date: 9/16/2022 1:05:00 PM
Lab ID: 2209880-002 **Matrix:** SOIL **Received Date:** 9/17/2022 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	9/19/2022 11:26:04 AM	70254
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	1300	29		mg/Kg	2	9/19/2022 12:56:49 PM	70248
Motor Oil Range Organics (MRO)	720	96		mg/Kg	2	9/19/2022 12:56:49 PM	70248
Surr: DNOP	85.3	21-129		%Rec	2	9/19/2022 12:56:49 PM	70248
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	230	21		mg/Kg	5	9/19/2022 9:25:57 AM	70234
Surr: BFB	350	37.7-212	S	%Rec	5	9/19/2022 9:25:57 AM	70234
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.11		mg/Kg	5	9/19/2022 9:25:57 AM	70234
Toluene	1.4	0.21		mg/Kg	5	9/19/2022 9:25:57 AM	70234
Ethylbenzene	0.92	0.21		mg/Kg	5	9/19/2022 9:25:57 AM	70234
Xylenes, Total	16	0.42		mg/Kg	5	9/19/2022 9:25:57 AM	70234
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	5	9/19/2022 9:25:57 AM	70234

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	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 range due to dilution or matrix interference		

Analytical Report
Lab Order **2209880**
Date Reported: **9/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-3
Project: Trunk E
Collection Date: 9/16/2022 1:10:00 PM
Lab ID: 2209880-003 **Matrix:** SOIL **Received Date:** 9/17/2022 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	9/19/2022 11:38:28 AM	70254
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	160	15		mg/Kg	1	9/19/2022 11:23:39 AM	70248
Motor Oil Range Organics (MRO)	120	49		mg/Kg	1	9/19/2022 11:23:39 AM	70248
Surr: DNOP	93.9	21-129		%Rec	1	9/19/2022 11:23:39 AM	70248
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	77	23		mg/Kg	5	9/19/2022 9:49:33 AM	70234
Surr: BFB	195	37.7-212		%Rec	5	9/19/2022 9:49:33 AM	70234
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12		mg/Kg	5	9/19/2022 9:49:33 AM	70234
Toluene	ND	0.23		mg/Kg	5	9/19/2022 9:49:33 AM	70234
Ethylbenzene	ND	0.23		mg/Kg	5	9/19/2022 9:49:33 AM	70234
Xylenes, Total	1.2	0.46		mg/Kg	5	9/19/2022 9:49:33 AM	70234
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	5	9/19/2022 9:49:33 AM	70234

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	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 range due to dilution or matrix interference		

Analytical Report
Lab Order **2209880**
Date Reported: **9/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-4
Project: Trunk E
Collection Date: 9/16/2022 1:15:00 PM
Lab ID: 2209880-004 **Matrix:** SOIL **Received Date:** 9/17/2022 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Chloride	ND	60		mg/Kg	20	9/19/2022 11:50:53 AM	70254
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/19/2022 11:48:19 AM	70248
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/19/2022 11:48:19 AM	70248
Surr: DNOP	81.3	21-129		%Rec	1	9/19/2022 11:48:19 AM	70248
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/19/2022 10:13:03 AM	70234
Surr: BFB	104	37.7-212		%Rec	1	9/19/2022 10:13:03 AM	70234
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	9/19/2022 10:13:03 AM	70234
Toluene	ND	0.041		mg/Kg	1	9/19/2022 10:13:03 AM	70234
Ethylbenzene	ND	0.041		mg/Kg	1	9/19/2022 10:13:03 AM	70234
Xylenes, Total	ND	0.081		mg/Kg	1	9/19/2022 10:13:03 AM	70234
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	9/19/2022 10:13:03 AM	70234

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	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 range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209880**

21-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **MB-70254**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **70254**	RunNo: **91126**
Prep Date: **9/19/2022**	Analysis Date: **9/19/2022**	SeqNo: **3261255** Units: **mg/Kg**

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

Sample ID: **LCS-70254**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **70254**	RunNo: **91126**
Prep Date: **9/19/2022**	Analysis Date: **9/19/2022**	SeqNo: **3261256** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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#: **2209880**

21-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **2209880-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-1**	Batch ID: **70248**	RunNo: **91130**
Prep Date: **9/19/2022**	Analysis Date: **9/19/2022**	SeqNo: **3260197** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	15	49.12	0	76.2	36.1	154			
Surr: DNOP	3.6		4.912		74.1	21	129			

Sample ID: **2209880-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-1**	Batch ID: **70248**	RunNo: **91130**
Prep Date: **9/19/2022**	Analysis Date: **9/19/2022**	SeqNo: **3260198** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	15	48.54	0	79.8	36.1	154	3.53	33.9	
Surr: DNOP	3.6		4.854		75.0	21	129	0	0	

Sample ID: **LCS-70248**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **70248**	RunNo: **91130**
Prep Date: **9/19/2022**	Analysis Date: **9/19/2022**	SeqNo: **3260207** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	15	50.00	0	77.3	64.4	127			
Surr: DNOP	3.7		5.000		73.9	21	129			

Sample ID: **MB-70248**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **70248**	RunNo: **91130**
Prep Date: **9/19/2022**	Analysis Date: **9/19/2022**	SeqNo: **3260209** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.6		10.00		86.1	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209880**

21-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **mb-70234**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **70234**	RunNo: **91122**
Prep Date: **9/16/2022**	Analysis Date: **9/19/2022**	SeqNo: **3260359** 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		101	37.7	212			

Sample ID: **lcs-70234**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **70234**	RunNo: **91122**
Prep Date: **9/16/2022**	Analysis Date: **9/19/2022**	SeqNo: **3260360** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	72.3	137			
Surr: BFB	2000		1000		201	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 range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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#: **2209880**

21-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **mb-70234**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **70234**	RunNo: **91122**
Prep Date: **9/16/2022**	Analysis Date: **9/19/2022**	SeqNo: **3260369** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		98.8	70	130			

Sample ID: **LCS-70234**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **70234**	RunNo: **91122**
Prep Date: **9/16/2022**	Analysis Date: **9/19/2022**	SeqNo: **3260370** 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	91.5	80	120			
Toluene	0.95	0.050	1.000	0	95.5	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.4	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	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 range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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: 2209880 | RcptNo: 1

Received By: Juan Rojas 8/17/2022 7:45:00 AM

Completed By: Juan Rojas 9/17/2022 7:58:23 AM

Reviewed By: VP 9/17/22

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 9/17/22

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	0.8	Good				

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: Ksummers@ensolum.com

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

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

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

Project Name: Trunk E

Project #:

Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ~~☐ Yes~~ ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.6+0.2=0.8 (°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. 2209880	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)
9/16/22	13:00	S	S-1	14oz jar	Cool	-001	X	X					X			
9/16/22	13:05	S	S-2			-002	X	X					X			
9/16/22	13:10	S	S-3			-003	X	X					X			
9/16/22	13:15	S	S-4			-004	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date Time
9/16/22	1560				9/16/22 1500
Date:	Time:	Relinquished by:	Received by:	Via:	Date Time
9/16/22	1840			courier	9/17/22 7:45

Remarks: PM Tom Long
Pay Key RB21200

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

September 28, 2022

Kyle Summers

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

RE: Trunk E OrderNo.: 2209D34

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/24/2022 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 **2209D34**
Date Reported: **9/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-5
Project: Trunk E **Collection Date:** 9/23/2022 10:00:00 AM
Lab ID: 2209D34-001 **Matrix:** MEOH (SOIL) **Received Date:** 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JMT**
Chloride	ND	60		mg/Kg	20	9/26/2022 10:33:54 AM	70397
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**DGH**
Diesel Range Organics (DRO)	68	14		mg/Kg	1	9/26/2022 11:01:49 AM	70394
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/26/2022 11:01:49 AM	70394
Surr: DNOP	82.9	21-129		%Rec	1	9/26/2022 11:01:49 AM	70394
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**BRM**
Gasoline Range Organics (GRO)	570	19		mg/Kg	5	9/26/2022 9:23:00 AM	B91300
Surr: BFB	298	37.7-212	S	%Rec	5	9/26/2022 9:23:00 AM	B91300
EPA METHOD 8021B: VOLATILES						Analyst:	**BRM**
Benzene	ND	0.095		mg/Kg	5	9/26/2022 9:23:00 AM	D91300
Toluene	3.7	0.19		mg/Kg	5	9/26/2022 9:23:00 AM	D91300
Ethylbenzene	2.0	0.19		mg/Kg	5	9/26/2022 9:23:00 AM	D91300
Xylenes, Total	26	0.38		mg/Kg	5	9/26/2022 9:23:00 AM	D91300
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	5	9/26/2022 9:23:00 AM	D91300

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	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 range due to dilution or matrix interference		

Analytical Report
Lab Order **2209D34**
Date Reported: **9/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-6
Project: Trunk E **Collection Date:** 9/23/2022 10:10:00 AM
Lab ID: 2209D34-002 **Matrix:** MEOH (SOIL) **Received Date:** 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	9/26/2022 10:46:19 AM	70397
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/26/2022 11:12:19 AM	70394
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/26/2022 11:12:19 AM	70394
Surr: DNOP	89.3	21-129		%Rec	1	9/26/2022 11:12:19 AM	70394
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**	
Gasoline Range Organics (GRO)	110	19		mg/Kg	5	9/26/2022 9:43:00 AM	B91300
Surr: BFB	178	37.7-212		%Rec	5	9/26/2022 9:43:00 AM	B91300
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**	
Benzene	ND	0.096		mg/Kg	5	9/26/2022 9:43:00 AM	D91300
Toluene	1.8	0.19		mg/Kg	5	9/26/2022 9:43:00 AM	D91300
Ethylbenzene	0.49	0.19		mg/Kg	5	9/26/2022 9:43:00 AM	D91300
Xylenes, Total	5.0	0.39		mg/Kg	5	9/26/2022 9:43:00 AM	D91300
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	5	9/26/2022 9:43:00 AM	D91300

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

Qualifiers:

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

Analytical Report
Lab Order **2209D34**
Date Reported: **9/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-7
Project: Trunk E **Collection Date:** 9/23/2022 10:20:00 AM
Lab ID: 2209D34-003 **Matrix:** MEOH (SOIL) **Received Date:** 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	9/26/2022 10:58:44 AM	70397
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/26/2022 11:22:51 AM	70394
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/26/2022 11:22:51 AM	70394
Surr: DNOP	81.6	21-129		%Rec	1	9/26/2022 11:22:51 AM	70394
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**	
Gasoline Range Organics (GRO)	ND	5.3		mg/Kg	1	9/26/2022 10:03:00 AM	B91300
Surr: BFB	104	37.7-212		%Rec	1	9/26/2022 10:03:00 AM	B91300
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**	
Benzene	ND	0.026		mg/Kg	1	9/26/2022 10:03:00 AM	D91300
Toluene	ND	0.053		mg/Kg	1	9/26/2022 10:03:00 AM	D91300
Ethylbenzene	ND	0.053		mg/Kg	1	9/26/2022 10:03:00 AM	D91300
Xylenes, Total	ND	0.11		mg/Kg	1	9/26/2022 10:03:00 AM	D91300
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	9/26/2022 10:03:00 AM	D91300

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	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 range due to dilution or matrix interference		

Analytical Report
Lab Order **2209D34**
Date Reported: **9/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-8
Project: Trunk E **Collection Date:** 9/23/2022 10:30:00 AM
Lab ID: 2209D34-004 **Matrix:** MEOH (SOIL) **Received Date:** 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	9/26/2022 11:11:09 AM	70397
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	16	15		mg/Kg	1	9/26/2022 11:33:23 AM	70394
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/26/2022 11:33:23 AM	70394
Surr: DNOP	83.0	21-129		%Rec	1	9/26/2022 11:33:23 AM	70394
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**	
Gasoline Range Organics (GRO)	21	20		mg/Kg	5	9/26/2022 10:23:00 AM	B91300
Surr: BFB	151	37.7-212		%Rec	5	9/26/2022 10:23:00 AM	B91300
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**	
Benzene	ND	0.099		mg/Kg	5	9/26/2022 10:23:00 AM	D91300
Toluene	ND	0.20		mg/Kg	5	9/26/2022 10:23:00 AM	D91300
Ethylbenzene	ND	0.20		mg/Kg	5	9/26/2022 10:23:00 AM	D91300
Xylenes, Total	ND	0.40		mg/Kg	5	9/26/2022 10:23:00 AM	D91300
Surr: 4-Bromofluorobenzene	99.9	70-130		%Rec	5	9/26/2022 10:23:00 AM	D91300

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	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 range due to dilution or matrix interference		

Analytical Report
Lab Order **2209D34**
Date Reported: **9/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-9
Project: Trunk E **Collection Date:** 9/23/2022 10:40:00 AM
Lab ID: 2209D34-005 **Matrix:** MEOH (SOIL) **Received Date:** 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	9/26/2022 11:23:33 AM	70397
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	430	14		mg/Kg	1	9/26/2022 11:43:57 AM	70394
Motor Oil Range Organics (MRO)	120	46		mg/Kg	1	9/26/2022 11:43:57 AM	70394
Surr: DNOP	84.0	21-129		%Rec	1	9/26/2022 11:43:57 AM	70394
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**	
Gasoline Range Organics (GRO)	990	19		mg/Kg	5	9/26/2022 10:42:00 AM	B91300
Surr: BFB	439	37.7-212	S	%Rec	5	9/26/2022 10:42:00 AM	B91300
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**	
Benzene	0.33	0.094		mg/Kg	5	9/26/2022 10:42:00 AM	D91300
Toluene	6.6	0.19		mg/Kg	5	9/26/2022 10:42:00 AM	D91300
Ethylbenzene	6.7	0.19		mg/Kg	5	9/26/2022 10:42:00 AM	D91300
Xylenes, Total	78	3.7		mg/Kg	50	9/26/2022 11:21:00 AM	D91300
Surr: 4-Bromofluorobenzene	170	70-130	S	%Rec	5	9/26/2022 10:42:00 AM	D91300

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	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 range due to dilution or matrix interference		

Analytical Report
Lab Order **2209D34**
Date Reported: **9/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-10
Project: Trunk E **Collection Date:** 9/23/2022 10:50:00 AM
Lab ID: 2209D34-006 **Matrix:** MEOH (SOIL) **Received Date:** 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	9/26/2022 11:35:57 AM	70397
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	21	14		mg/Kg	1	9/26/2022 11:54:31 AM	70394
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/26/2022 11:54:31 AM	70394
Surr: DNOP	85.8	21-129		%Rec	1	9/26/2022 11:54:31 AM	70394
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**	
Gasoline Range Organics (GRO)	34	19		mg/Kg	5	9/26/2022 11:02:00 AM	B91300
Surr: BFB	189	37.7-212		%Rec	5	9/26/2022 11:02:00 AM	B91300
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**	
Benzene	ND	0.094		mg/Kg	5	9/26/2022 11:02:00 AM	D91300
Toluene	ND	0.19		mg/Kg	5	9/26/2022 11:02:00 AM	D91300
Ethylbenzene	ND	0.19		mg/Kg	5	9/26/2022 11:02:00 AM	D91300
Xylenes, Total	ND	0.38		mg/Kg	5	9/26/2022 11:02:00 AM	D91300
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	5	9/26/2022 11:02:00 AM	D91300

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	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 range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209D34**

28-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **MB-70397**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **70397**	RunNo: **91306**
Prep Date: **9/26/2022**	Analysis Date: **9/26/2022**	SeqNo: **3268201** Units: **mg/Kg**

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

Sample ID: **LCS-70397**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **70397**	RunNo: **91306**
Prep Date: **9/26/2022**	Analysis Date: **9/26/2022**	SeqNo: **3268202** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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#: **2209D34**
28-Sep-22

Client: ENSOLUM
Project: Trunk E

Sample ID: **2209D34-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-5** Batch ID: **70394** RunNo: **91307**
Prep Date: **9/26/2022** Analysis Date: **9/26/2022** SeqNo: **3267727** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	79	14	47.98	68.24	23.4	36.1	154			S
Surr: DNOP	3.9		4.798		80.4	21	129			

Sample ID: **2209D34-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-5** Batch ID: **70394** RunNo: **91307**
Prep Date: **9/26/2022** Analysis Date: **9/26/2022** SeqNo: **3267728** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	15	50.00	68.24	76.0	36.1	154	28.8	33.9	
Surr: DNOP	3.6		5.000		72.0	21	129	0	0	

Sample ID: **LCS-70394** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **70394** RunNo: **91307**
Prep Date: **9/26/2022** Analysis Date: **9/26/2022** SeqNo: **3267735** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	34	15	50.00	0	68.5	64.4	127			
Surr: DNOP	3.4		5.000		67.5	21	129			

Sample ID: **MB-70394** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **70394** RunNo: **91307**
Prep Date: **9/26/2022** Analysis Date: **9/26/2022** SeqNo: **3267737** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.0		10.00		80.4	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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#: **2209D34**
28-Sep-22

Client: ENSOLUM
Project: Trunk E

Sample ID: **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **B91300** RunNo: **91300**
Prep Date: Analysis Date: **9/26/2022** SeqNo: **3268154** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.6	72.3	137			
Surr: BFB	2100		1000		214	37.7	212			S

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **B91300** RunNo: **91300**
Prep Date: Analysis Date: **9/26/2022** SeqNo: **3268155** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		107	37.7	212			

Sample ID: **2209d34-001a ms** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-5** Batch ID: **B91300** RunNo: **91300**
Prep Date: Analysis Date: **9/26/2022** SeqNo: **3268156** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	660	19	94.70	567.7	94.3	70	130			
Surr: BFB	15000		3788		408	37.7	212			S

Sample ID: **2209D34-001A MSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-5** Batch ID: **B91300** RunNo: **91300**
Prep Date: Analysis Date: **9/26/2022** SeqNo: **3268157** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	620	19	94.70	567.7	58.4	70	130	5.31	20	S
Surr: BFB	15000		3788		400	37.7	212	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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#: **2209D34**

28-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **D91300**	RunNo: **91300**
Prep Date:	Analysis Date: **9/26/2022**	SeqNo: **3268168** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.0	80	120			
Toluene	0.90	0.050	1.000	0	90.0	80	120			
Ethylbenzene	0.90	0.050	1.000	0	90.2	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.6	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.0	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **D91300**	RunNo: **91300**
Prep Date:	Analysis Date: **9/26/2022**	SeqNo: **3268169** 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	0.92		1.000		92.0	70	130			

Sample ID: **2209d34-002a ms**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-6**	Batch ID: **D91300**	RunNo: **91300**
Prep Date:	Analysis Date: **9/26/2022**	SeqNo: **3268170** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.4	0.096	3.855	0	89.5	68.8	120			
Toluene	5.2	0.19	3.855	1.814	87.4	73.6	124			
Ethylbenzene	4.0	0.19	3.855	0.4921	91.1	72.7	129			
Xylenes, Total	15	0.39	11.57	4.991	88.0	75.7	126			
Surr: 4-Bromofluorobenzene	3.9		3.855		101	70	130			

Sample ID: **2209D34-002A MSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-6**	Batch ID: **D91300**	RunNo: **91300**
Prep Date:	Analysis Date: **9/26/2022**	SeqNo: **3268171** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.3	0.096	3.855	0	85.7	68.8	120	4.33	20	
Toluene	4.9	0.19	3.855	1.814	81.2	73.6	124	4.66	20	
Ethylbenzene	3.8	0.19	3.855	0.4921	86.6	72.7	129	4.49	20	
Xylenes, Total	15	0.39	11.57	4.991	82.5	75.7	126	4.29	20	
Surr: 4-Bromofluorobenzene	3.6		3.855		94.4	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 range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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: **2209D34** RcptNo: 1

Received By: **Cheyenne Cason** **9/24/2022 7:00:00 AM** Chel

Completed By: **Cheyenne Cason** **9/24/2022 7:12:47 AM** Chel

Reviewed By: JM 9/26/22

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: CME 9/24/22

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	4.3	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: ksummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

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

Project Name: Trunk E

Project #: See Notes

Project Manager: K. Summers

Sampler: L. Daniell

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 4.3 - 0 = 4.3 (°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. 2209034	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)
9/23/22	10:00	S	S-5	1402 jar	Cool	001	X	X					X			
9/23/22	10:10	S	S-6			002	X	X					X			
9/23/22	10:20	S	S-7			003	X	X					X			
9/23/22	10:30	S	S-8			004	X	X					X			
9/23/22	10:40	S	S-9			005	X	X					X			
9/23/22	10:50	S	S-10			006	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/23/22	1311				9/23/22	1311
9/23/22	1810	Christian Walters	CMC	Carter	9/24/22	0700

Remarks: PM Tom Long
Pay Key: RB21700

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

September 30, 2022

Kyle Summers

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

RE: Trunk E OrderNo.: 2209E89

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/28/2022 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 **2209E89**
Date Reported: **9/30/2022**

CLIENT: ENSOLUM
Client Sample ID: S-11
Project: Trunk E
Collection Date: 9/27/2022 12:00:00 PM
Lab ID: 2209E89-001
Matrix: MEOH (SOIL)
Received Date: 9/28/2022 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	9/28/2022 10:31:27 AM	70452
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/28/2022 10:19:19 AM	70449
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/28/2022 10:19:19 AM	70449
Surr: DNOP	84.5	21-129		%Rec	1	9/28/2022 10:19:19 AM	70449
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**	
Gasoline Range Organics (GRO)	ND	22		mg/Kg	5	9/28/2022 9:37:00 AM	A91349
Surr: BFB	106	37.7-212		%Rec	5	9/28/2022 9:37:00 AM	A91349
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**	
Benzene	ND	0.11		mg/Kg	5	9/28/2022 9:37:00 AM	B91349
Toluene	ND	0.22		mg/Kg	5	9/28/2022 9:37:00 AM	B91349
Ethylbenzene	ND	0.22		mg/Kg	5	9/28/2022 9:37:00 AM	B91349
Xylenes, Total	ND	0.43		mg/Kg	5	9/28/2022 9:37:00 AM	B91349
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	5	9/28/2022 9:37:00 AM	B91349

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	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 range due to dilution or matrix interference		

Analytical Report
Lab Order **2209E89**
Date Reported: **9/30/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-12
Project: Trunk E **Collection Date:** 9/27/2022 12:05:00 PM
Lab ID: 2209E89-002 **Matrix:** MEOH (SOIL) **Received Date:** 9/28/2022 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	9/28/2022 10:43:47 AM	70452
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**	
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/28/2022 12:31:42 PM	70449
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/28/2022 12:31:42 PM	70449
Surr: DNOP	85.7	21-129		%Rec	1	9/28/2022 12:31:42 PM	70449
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/28/2022 10:16:00 AM	A91349
Surr: BFB	106	37.7-212		%Rec	1	9/28/2022 10:16:00 AM	A91349
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**	
Benzene	ND	0.021		mg/Kg	1	9/28/2022 10:16:00 AM	B91349
Toluene	ND	0.041		mg/Kg	1	9/28/2022 10:16:00 AM	B91349
Ethylbenzene	ND	0.041		mg/Kg	1	9/28/2022 10:16:00 AM	B91349
Xylenes, Total	ND	0.082		mg/Kg	1	9/28/2022 10:16:00 AM	B91349
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	9/28/2022 10:16:00 AM	B91349

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	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 range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209E89**

30-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **MB-70452**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **70452**	RunNo: **91368**
Prep Date: **9/28/2022**	Analysis Date: **9/28/2022**	SeqNo: **3272046** Units: **mg/Kg**

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

Sample ID: **LCS-70452**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **70452**	RunNo: **91368**
Prep Date: **9/28/2022**	Analysis Date: **9/28/2022**	SeqNo: **3272047** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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#: **2209E89**

30-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **2209E89-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-11**	Batch ID: **70449**	RunNo: **91371**
Prep Date: **9/28/2022**	Analysis Date: **9/28/2022**	SeqNo: **3271135** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	15	49.70	0	82.4	36.1	154			
Surr: DNOP	3.6		4.970		71.9	21	129			

Sample ID: **2209E89-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-11**	Batch ID: **70449**	RunNo: **91371**
Prep Date: **9/28/2022**	Analysis Date: **9/28/2022**	SeqNo: **3271136** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	14	45.96	0	81.6	36.1	154	8.80	33.9	
Surr: DNOP	3.2		4.596		70.4	21	129	0	0	

Sample ID: **LCS-70449**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **70449**	RunNo: **91371**
Prep Date: **9/28/2022**	Analysis Date: **9/28/2022**	SeqNo: **3271148** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	34	15	50.00	0	68.0	64.4	127			
Surr: DNOP	3.2		5.000		64.8	21	129			

Sample ID: **MB-70449**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **70449**	RunNo: **91371**
Prep Date: **9/28/2022**	Analysis Date: **9/28/2022**	SeqNo: **3271156** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.6		10.00		75.9	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209E89**

30-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **A91349**	RunNo: **91349**
Prep Date:	Analysis Date: **9/28/2022**	SeqNo: **3271436** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.6	72.3	137			
Surr: BFB	2200		1000		217	37.7	212			S

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **A91349**	RunNo: **91349**
Prep Date:	Analysis Date: **9/28/2022**	SeqNo: **3271437** 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		105	37.7	212			

Sample ID: **2209e89-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-11**	Batch ID: **A91349**	RunNo: **91349**
Prep Date:	Analysis Date: **9/28/2022**	SeqNo: **3271442** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.3	21.70	0	101	70	130			
Surr: BFB	1900		868.1		217	37.7	212			S

Sample ID: **2209e89-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-11**	Batch ID: **A91349**	RunNo: **91349**
Prep Date:	Analysis Date: **9/28/2022**	SeqNo: **3271443** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.3	21.70	0	96.0	70	130	5.07	20	
Surr: BFB	1900		868.1		214	37.7	212	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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#: **2209E89**

30-Sep-22

Client: ENSOLUM

Project: Trunk E

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B91349**	RunNo: **91349**
Prep Date:	Analysis Date: **9/28/2022**	SeqNo: **3271515** 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	90.8	80	120			
Toluene	0.91	0.050	1.000	0	90.7	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.1	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.3	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.1	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B91349**	RunNo: **91349**
Prep Date:	Analysis Date: **9/28/2022**	SeqNo: **3271516** 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		94.9	70	130			

Sample ID: **2209e89-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-12**	Batch ID: **B91349**	RunNo: **91349**
Prep Date:	Analysis Date: **9/28/2022**	SeqNo: **3271521** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.65	0.018	0.7067	0	91.6	68.8	120			
Toluene	0.66	0.035	0.7067	0	93.0	73.6	124			
Ethylbenzene	0.66	0.035	0.7067	0	93.8	72.7	129			
Xylenes, Total	2.0	0.071	2.120	0	92.3	75.7	126			
Surr: 4-Bromofluorobenzene	0.63		0.7067		89.0	70	130			

Sample ID: **2209e89-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-12**	Batch ID: **B91349**	RunNo: **91349**
Prep Date:	Analysis Date: **9/28/2022**	SeqNo: **3271522** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.60	0.018	0.7067	0	85.3	68.8	120	7.17	20	
Toluene	0.62	0.035	0.7067	0	87.4	73.6	124	6.20	20	
Ethylbenzene	0.63	0.035	0.7067	0	88.8	72.7	129	5.44	20	
Xylenes, Total	1.9	0.071	2.120	0	87.9	75.7	126	4.94	20	
Surr: 4-Bromofluorobenzene	0.63		0.7067		88.7	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 range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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: 2209E89 | RcptNo: 1

Received By: Juan Rojas 9/28/2022 7:05:00 AM

Completed By: Tracy Casarrubias 9/28/2022 7:40:58 AM

Reviewed By: 9-28-22

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: JM 9/28/22

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	0.9	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 120% Same Day

Project Name: Trunk E

Project #:

Project Manager: K Summers

Sampler: L. Daniell

On Ice: ☐ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.8+0.1=0.9 (°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. 2209E89	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)
9/27/22	12:00	S	S-11	1402 jar	Cool	001	X	X					X			
9/27/22	12:05	S	S-12	↓	↓	002	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/27/22	1259				9/27/22	1259
9/27/22	1802	Thusti Waller		courier	9/28/22	7:10

Remarks: PM Tom Long
PO#: RBZ1200
Same Day

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

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

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

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 226502
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	6/13/2023