

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): nAPP2133653220
Contact mailing address: 614 Reilly Ave, Farmington, NM 87401	

Location of Release Source

Latitude **36.450981** Longitude **-107.404642** (NAD 83 in decimal degrees to 5 decimal places)

Site Name Jicarilla Gas Com B #1 CH	Site Type Natural Gas Gathering Pipeline
Date Release Discovered: 11/30/2021	Serial Number (if applicable): N/A

Unit Letter	Section	Township	Range	County
N	30	26N	5W	Rio Arriba

Surface Owner: ☐ State ☐ Federal ☒ Tribal ☐ Private (Name: Jicarilla Apache Tribe)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Condensate	Volume Released (bbls): 15-20 BBLS	Volume Recovered (bbls): None
<input checked="" type="checkbox"/> Natural Gas	Volume Released (Mcf): 2.2 MCF	Volume Recovered (Mcf): None
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: : On November 30, 2021, Enterprise had a release of natural gas and natural gas liquids from the Jicarilla Gas Com B #1 CH pipeline. The pipeline was isolated, depressurized, locked and tagged out. No washes or residents were affected. No fire occurred. No emergency services responded. Release liquids ran down a hill and affected an area approximately 300 feet long by one foot wide. A total of 647 cubic yards of hydrocarbon impacted soil was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm. On January 21, 2022, Jicarilla Apache Nation Environmental Protection Office approved the variance request and alternative closure method proposed by Enterprise for the contaminant concentrations exceeding NMOCD remediation standards. Between January 26, and January 31, 2022, approximately 900 gallons of potassium permanganate were applied to the pipeline and flow path excavations which were subsequently backfilled. A third party closure report is included with this "Final." C-141.

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

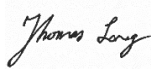
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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:  Date: 05-09-2022

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:  Date: 05/20/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv



CLOSURE REPORT

Property:

**Jicarilla Gas Com B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W
Rio Arriba County, New Mexico**

NM EMNRD OCD Incident ID No. NAPP2133653220

April 21, 2022

Ensolum Project No. 05A1226172

Prepared for:

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

Prepared by:

A handwritten signature in blue ink, reading "Ranee Deechilly".

Ranee Deechilly
Project Manager

A handwritten signature in blue ink, reading "Kyle Summers".

Kyle Summers
Senior Project Manager

Closure Report
Enterprise Field Services, LLC
Jicarilla Gas Com B #1 CH (11/30/21)
April 21, 2022



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Closure Report
Enterprise Field Services, LLC
Jicarilla Gas Com B #1 CH (11/30/21)
April 21, 2022



1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Jicarilla Gas Com B #1 CH (11/30/21) (Site)
NM EMNRD OCD Incident ID No.	NAPP2133653220
Location:	36.450981° North, 107.404642° West Unit Letter N, Section 30, Township 26 North, Range 5 West Rio Arriba County, New Mexico
Property:	Jicarilla Apache Nation
Regulatory:	Jicarilla Apache Nation Environmental Protection Office (JAN-EPO)

On November 30, 2021, a release of natural gas and associated liquids from the Jicarilla Gas Com B #1 CH pipeline was discovered at the Site. The release was characterized by discoloration of the ground surface and a flow path that traveled southwest from the release point. Enterprise verified a leak and subsequently isolated and locked the pipeline out of service. Before remediation activities were initiated Enterprise conducted an on-Site meeting to discuss the scope of work on December 1, 2021, with representatives from the JAN-EPO, Bureau of Indian Affairs (BIA), Jicarilla Apache Oil and Gas Administration, and the Jicarilla Apache Tribal Historic Preservation Office (THPO). Due to the concern of encountering cultural artifacts, an archeological survey was conducted at the Site and in the surrounding area. Following clearance from THPO and the approval to proceed with remediation from JAN-EPO and the BIA, Enterprise initiated activities to repair the pipeline and remediate petroleum hydrocarbon impact on December 9, 2021.

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 under the jurisdiction of the Jicarilla Apache Nation and is subject to regulatory oversight by the JAN-EPO. Ensolum, LLC (Ensolum) deferred to the New Mexico Administrative Code (NMAC) 19.15.29 *Releases*, as guidance, which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action. 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 with recorded depth to water were identified within the same Public Land Survey System (PLSS) section as the Site or in the adjacent PLSS sections. The OSE POD Locations Online Mapping Tool identifies one POD (SJ-01098) southeast of the Site (approximately 0.5 miles) (**Figure A, Appendix B**). There is no recorded depth to water for this POD. The only information available for this POD is an approved application for permit to appropriate the underground waters.

- No cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database within the same PLSS section as the site. One CPW was identified in an adjacent PLSS section. The approximate location of the CPW is depicted on **Figure B (Appendix B)**. The CPW is associated with the Johnston A Com G #18M and Carter Mesa Com #1 oil/gas production wells and is approximately 1.2 miles southwest of the Site and approximately 55 feet higher in elevation than the Site. The record for this CPW indicates a reported depth to water of 100 feet below grade surface (bgs).
- The Site is not located within 300 feet of a NM EMNRD OCD-defined continuously flowing watercourse or significant watercourse. The Site is located within a small natural drainage (**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 fresh water 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 fresh water 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.
- Based on information provided by the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is not within a 100-year floodplain (**Figure H, Appendix B**).

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

Closure Report
Enterprise Field Services, LLC
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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 kilograms (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 December 9, 2021, Enterprise initiated activities to remediate petroleum hydrocarbon impact resulting from the release. During the remediation and corrective action activities, Sierra Oilfield Services Inc, provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

During the remediation activities, sandstone was encountered. Due to safety concerns related to the extent and depth of the excavation and the hillside location of the flow path, Site activities were suspended after the January 24, 2022 sampling event. Enterprise corresponded with the JAN-EPO and reached an agreement on a variance request and alternative closure method that included the supplemental application of potassium permanganate to the excavation prior to backfilling. Potassium permanganate was selected for its ability to persistently degrade (through chemical oxidation via the permanganate anion) petroleum hydrocarbon COCs. On January 21, 2022, JAN-EPO approved the variance request and alternative closure method proposed by Enterprise. Between January 26, and January 31, 2022, approximately 900 gallons of potassium permanganate were applied to the pipeline and flow path excavations by Envirotech prior to backfilling activities.

The final excavation measured approximately 30 feet long and 21 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 20 feet bgs. The final flow path traveled approximately 220 feet to the east, with a maximum width of 4 feet. The maximum depth of the flow path excavation measured approximately one foot bgs. The lithology encountered during the completion of remediation activities consisted primarily of unconsolidated silty sandy clay and weathered shale, underlain by sandstone.

Approximately 647 cubic yards (yd³) of petroleum hydrocarbon affected soils and 20 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 flow path excavation was backfilled with dead vegetation and rocks to prevent future erosion to help sustain the stability of the treatment area. The pipeline excavation was backfilled with JAN-EPO approved native fill and then contoured to the surrounding grade. Erosion control berms were constructed to minimize gouging.

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

Ensolum's soil sampling program included the collection of 22 composite soil samples (S-1 through S-22,) from the excavation and five flow path composite soil samples (FP-1 through FP-5) for laboratory analysis. The composite samples were comprised of five aliquots each and represent an estimated 200 square foot (ft²) sample area per guidelines outlined in Section D of 19.15.29.12 NMAC. Hand tools and an excavator, operated by Sierra, were utilized to obtain fresh aliquots from each area of the excavation. Regulatory correspondence is provided in **Appendix E**.

First Sampling Event

On December 16, 2021, the first sampling event was performed at the Site. The JAN-EPO was notified of the sampling event although no representative was present during sampling activities. Composite soil samples S-1 (0'-3') and S-2 (0'-3') were collected from the pipe chase end walls.

Second Sampling Event

On December 22, 2021, a second sampling event was performed. The JAN-EPO was present during sampling activities. Composite soil sample S-3 (10'), was collected from the floor of the excavation. Composite soil samples S-4 (0'-10'), S-5 (0'-7'), and S-6 (0'-10'), were collected from the walls of the excavation. Subsequent soil analytical results identified COC concentrations that exceeded the NM EMNRD OCD closure criteria for composite soil samples S-5, S-7, and S-12. In response to the exceedances the excavation was deepened and extended. Soil associated with samples S-3, S-4, S-5, and S-6, were removed by excavation, and transported to the landfarm. The soils associated with composite soil samples S-1 and S-2, although exhibiting no exceedances, were removed to facilitate access.

Third Sampling Event

On January 19, 2021, a third sampling event was performed. The JAN-EPO was present during sampling activities. Composite soil samples S-7 (20'), and S-8 (18'), were collected from the floor of the excavation. Composite soil samples S-9 (0'-9'), S-10 (9'-18'), S-11 (12'-18'), S-12 (6'-12'), S-13 (0'-6'), S-14 (12'-20'), S-15 (6'-12'), S-16 (0'-6'), S-17 (8'-16'), and S-18 (0'-8'), were collected from the walls of the excavation. Subsequent soil analytical results identified COC concentrations that exceeded the NM EMNRD OCD closure criteria for soil samples S-7, S-8, S-10, S-11, S-14, S-15, and S-16.

On January 21, 2022, JAN-EPO approved the variance request and alternative closure method proposed by Enterprise that included the application of potassium permanganate to the excavation prior to backfill.

Fourth Sampling Event

On January 24, 2021, Enterprise continued remediation of the flow path and a fourth sampling event was performed. The JAN-EPO was present during sampling activities. Composite soil samples S-19 (18'), and S-20 (18'), were collected from the floor of the excavation. Composite soil samples S-21 (0'-12'), and S-22 (0'-12'), were collected from the walls of the excavation. Composite soil samples FP-1 (1'), FP-2 (1'), FP-3 (0.5), FP-4 (0.5), and FP-4 (0.5), were collected from the floor of the excavated flow path. Subsequent soil analytical results identified COC concentrations that exceeded the NM EMNRD OCD closure criteria for soil samples FP-1, FP-2, and FP-3.

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 BTEX, TPH, and chloride laboratory analytical results associated with the composite soil samples (S-7 through S-22 and FP-1 through FP-5) to the NM EMNRD OCD Tier I closure criteria. In the event that the laboratory did not quantify a result for BTEX or chloride, Ensolum compared the laboratory supplied practical quantitation limits (PQLs) / reporting limits (RLs) to the NM EMNRD OCD closure criteria. Due to the high PQLs/RLs associated with the TPH MRO range when using EPA SW-846 Method #8015, Ensolum only compared the quantified results to the NM EMNRD OCD closure criteria. The soils associated with composite soil samples S-1 through S-6 were removed from the Site, and therefore, are not included in the following discussion.

- The laboratory analytical result for composite soil sample S-8 indicates a benzene concentration of 14 mg/kg, which exceeds the NM EMNRD OCD closure criteria of 10 mg/kg. The laboratory analytical results for composite soil samples S-7, S-19, and FP-1 indicate benzene concentrations of 5.6 mg/kg, 0.39 mg/kg, and 0.33 mg/kg, respectively, which are below the NM EMNRD OCD closure criteria of 10 mg/kg. The laboratory analytical results for all other composite soil samples collected from soils remaining at the Site indicate benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the NM EMNRD OCD closure criteria of 10 mg/kg.
- The laboratory analytical results for composite soil samples S-7, S-8, S-19, and FP-1 indicate total BTEX concentrations of 280 mg/kg, 630 mg/kg, 60 mg/kg, and 170 mg/kg, respectively, which exceed the NM EMNRD OCD closure criteria of 50 mg/kg. The laboratory analytical results for all other composite soil samples collected from soils remaining at the Site indicate total BTEX concentrations ranging from below the laboratory PQLs/RLs to 26 mg/kg (FP-3), which are less than the NM EMNRD OCD closure criteria of 50 mg/kg.
- The laboratory analytical results for composite soil samples S-7, S-8, S-10, S-11, S-16, S-19, S-20, FP-1, FP-1, and FP-3 indicate combined TPH GRO/DRO/MRO concentrations ranging from 130 mg/kg (S-16) to 7,400 mg/kg (S-8), which exceed the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for all other composite soil samples collected from soils remaining at the Site indicate combined TPH GRO/DRO/MRO concentrations ranging from below the laboratory PQLs/RLs to 44 mg/kg (S-14), which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg.
- The laboratory analytical result for composite soil sample S-14 indicates a chloride concentration of 4,100 mg/kg, which exceeds the NM EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for all other composite soil samples collected from soils remaining at the Site indicate chloride concentrations ranging from below the laboratory PQLs/RLs to 340 mg/kg (FP-2), which are less than the New Mexico EMNRD OCD closure criteria of 600 mg/kg.

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

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April 21, 2022



7.0 RECLAMATION AND REVEGETATION

Following the application of potassium permanganate, the pipeline excavation was backfilled with JAN-EPO approved native fill and then contoured to the surrounding grade. Boulders and rocks were placed along the slope of the former pipeline excavation footprint to help reduce and prevent erosion. With approval from JAN-EPO, the flow path excavation was backfilled with dead vegetation, rocks, and boulders as methods of erosion control. Enterprise will re-seed the Site with an approved seeding mixture.

8.0 FINDINGS AND RECOMMENDATION

- Twenty-seven composite soil samples were collected from the Site. Based on laboratory analytical results, benzene, BTEX, chloride, and combined TPH GRO/DRO/MRO exceedances were identified in the Site soils.
- JAN-EPO approved the variance request and alternative closure method proposed by Enterprise that included the application of potassium permanganate to the excavation prior to backfill.
- Approximately 647 yd³ of petroleum hydrocarbon affected soils and 20 bbls of hydro-excavation soil cuttings and water were transported to the Envirotech landfarm for disposal/remediation.

The JAN-EPO approved the variance and closure plan as proposed by Enterprise and subsequently performed at the Site.

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

Closure Report
Enterprise Field Services, LLC
Jicarilla Gas Com B #1 CH (11/30/21)
April 21, 2022

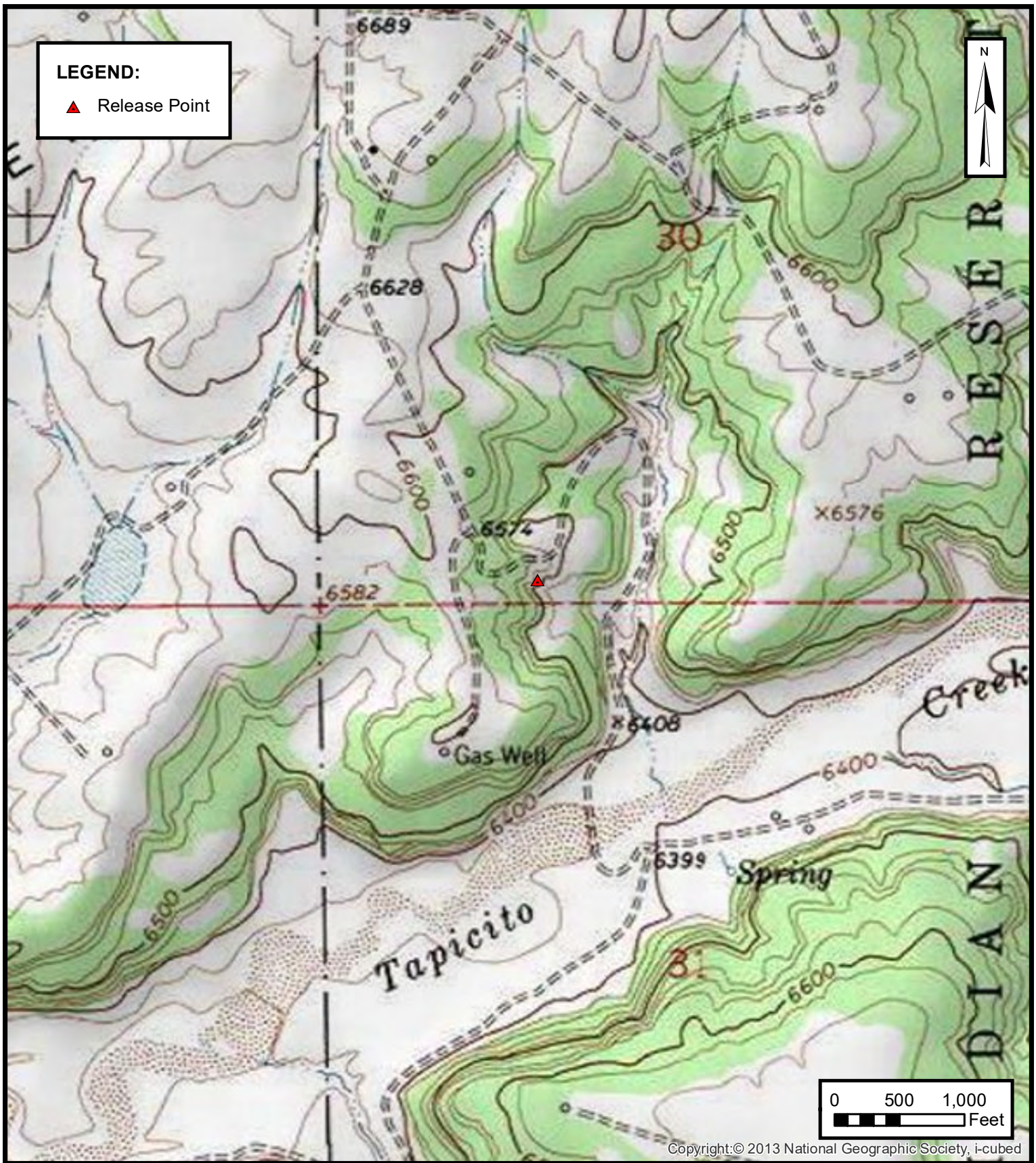


client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the Closure Report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.



APPENDIX A

Figures



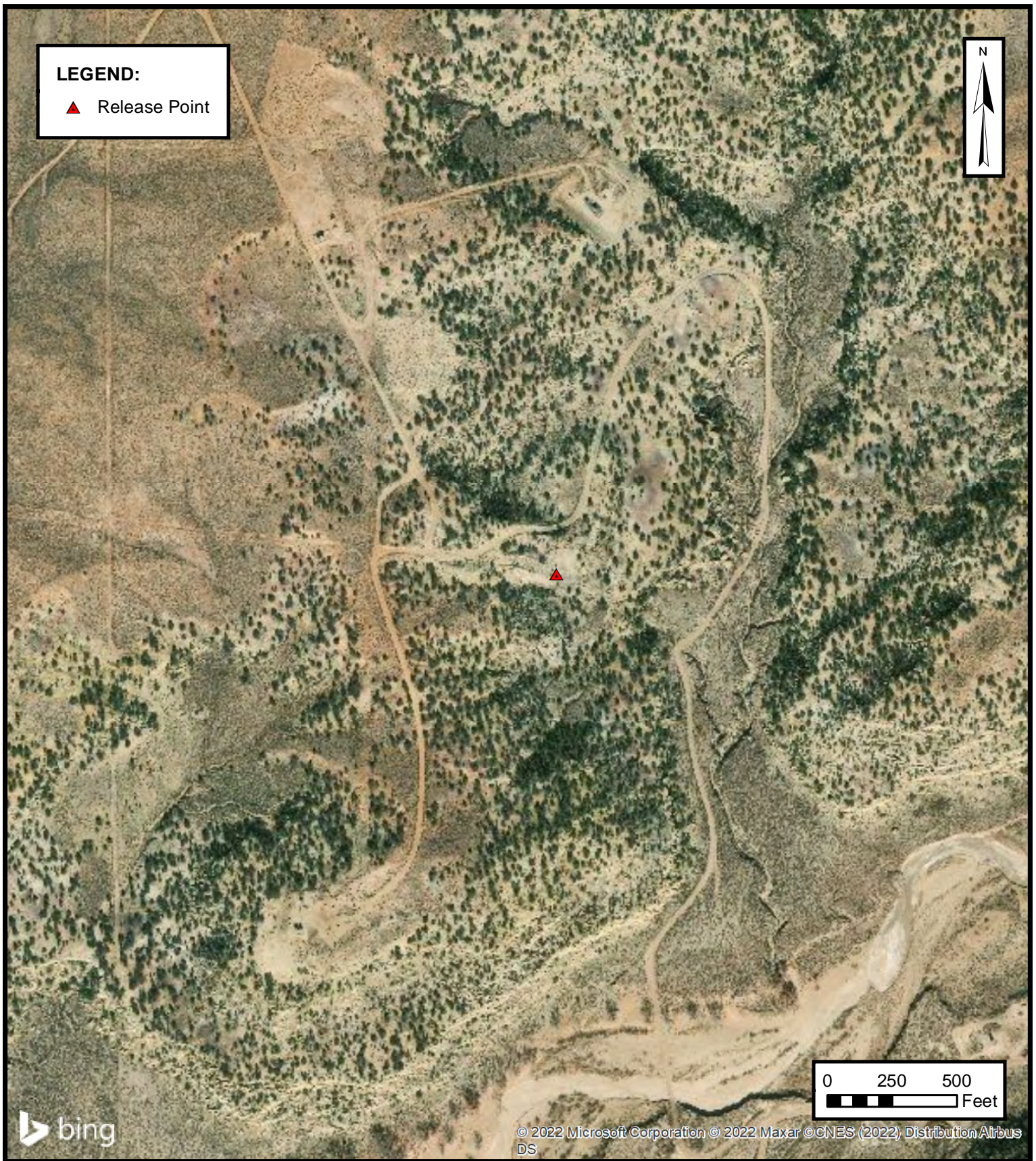
ENSOLUM
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

PROJECT NUMBER: 05A1226172

FIGURE
1



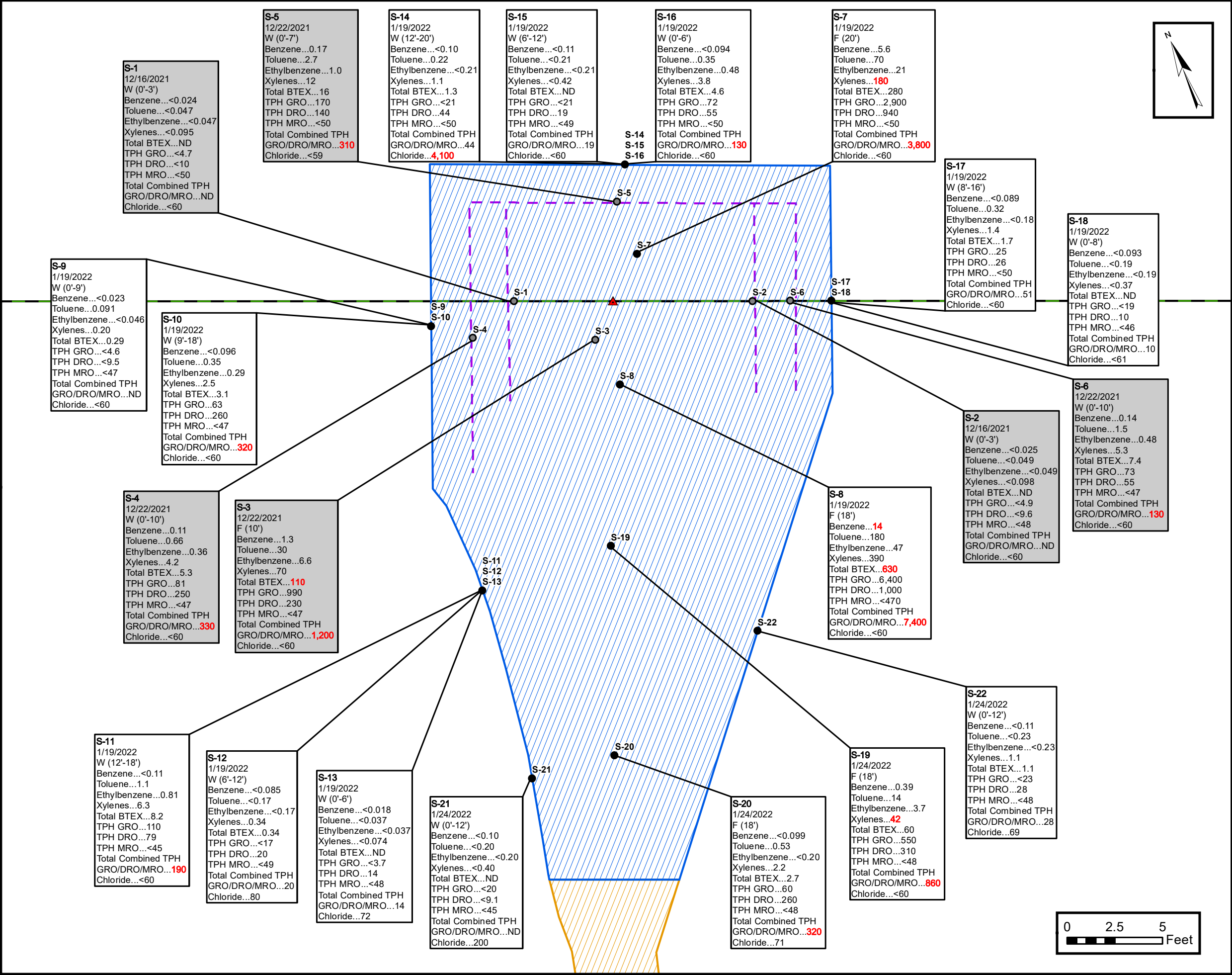
SITE VICINITY MAP

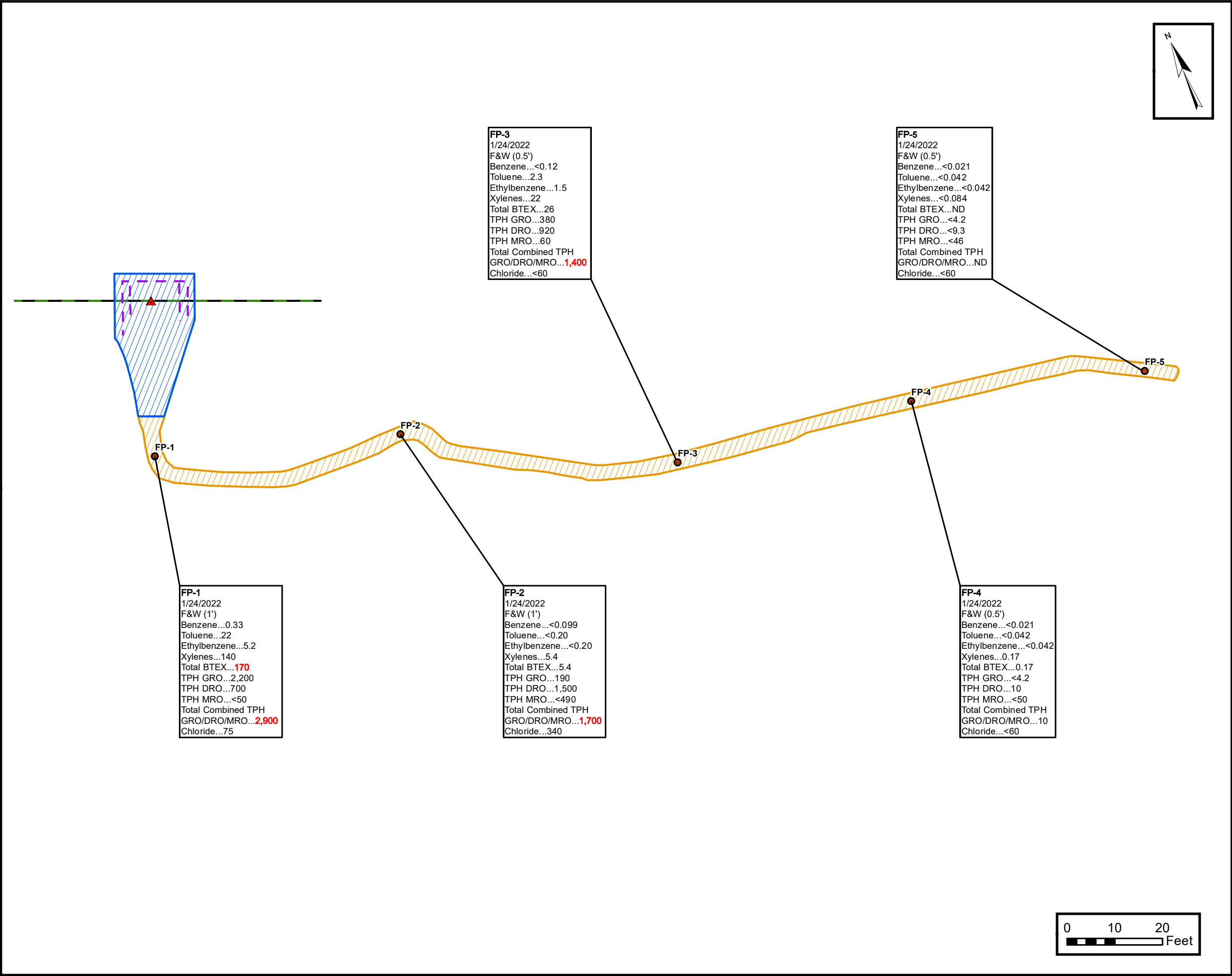
ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

PROJECT NUMBER: 05A1226172

FIGURE

2





LEGEND:

- Release Point
- Flow Path Composite Soil Sample Location
- Former Sidewall
- Approximate Pipeline Location
- Extent of Excavation
- Extent of Flow Path

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.



FLOW PATH EXCAVATION WITH SOIL ANALYTICAL RESULTS

ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)

Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

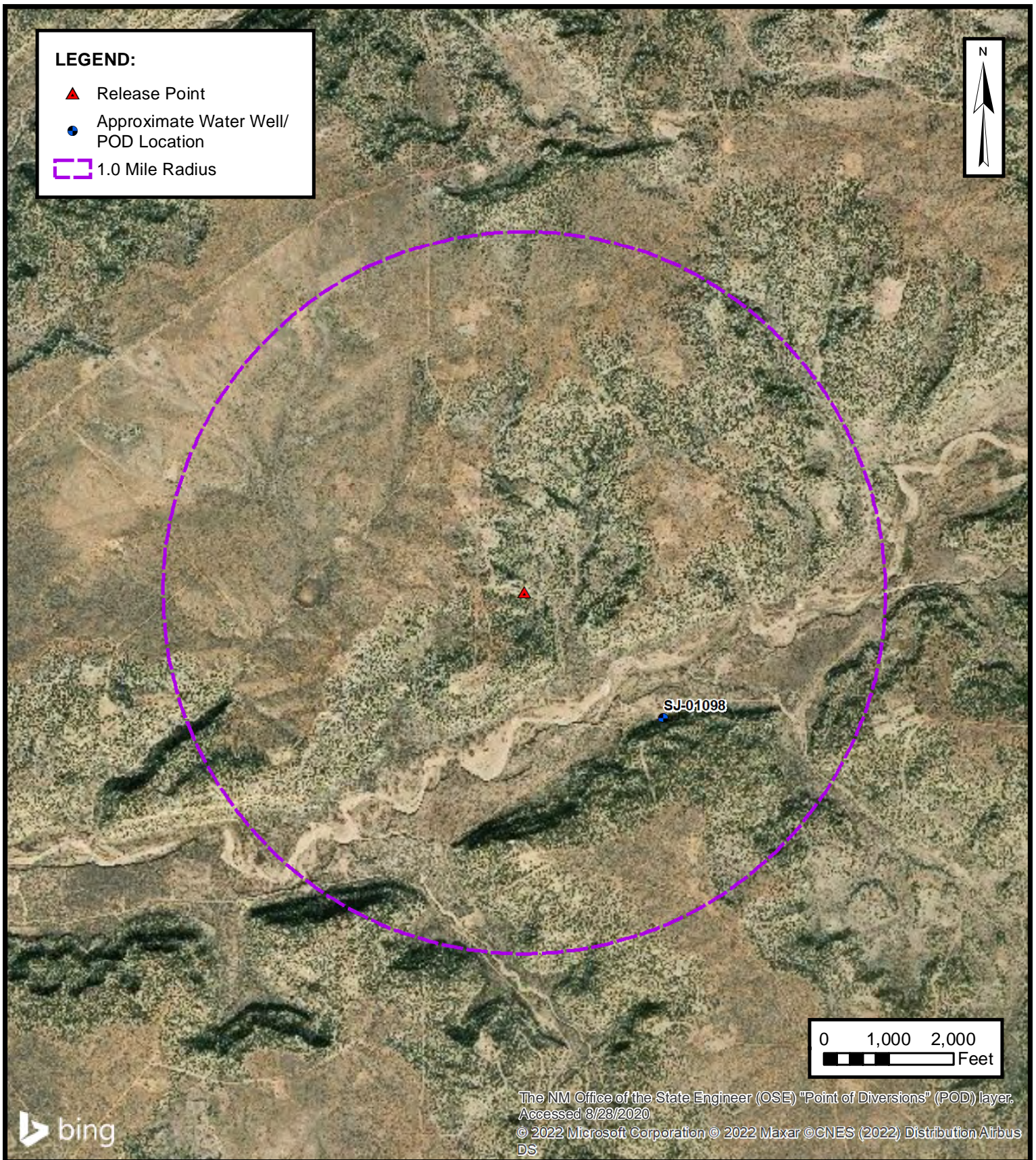
FIGURE
3B

PROJECT NUMBER: 05A1226172



APPENDIX B

Siting Figures and Documentation

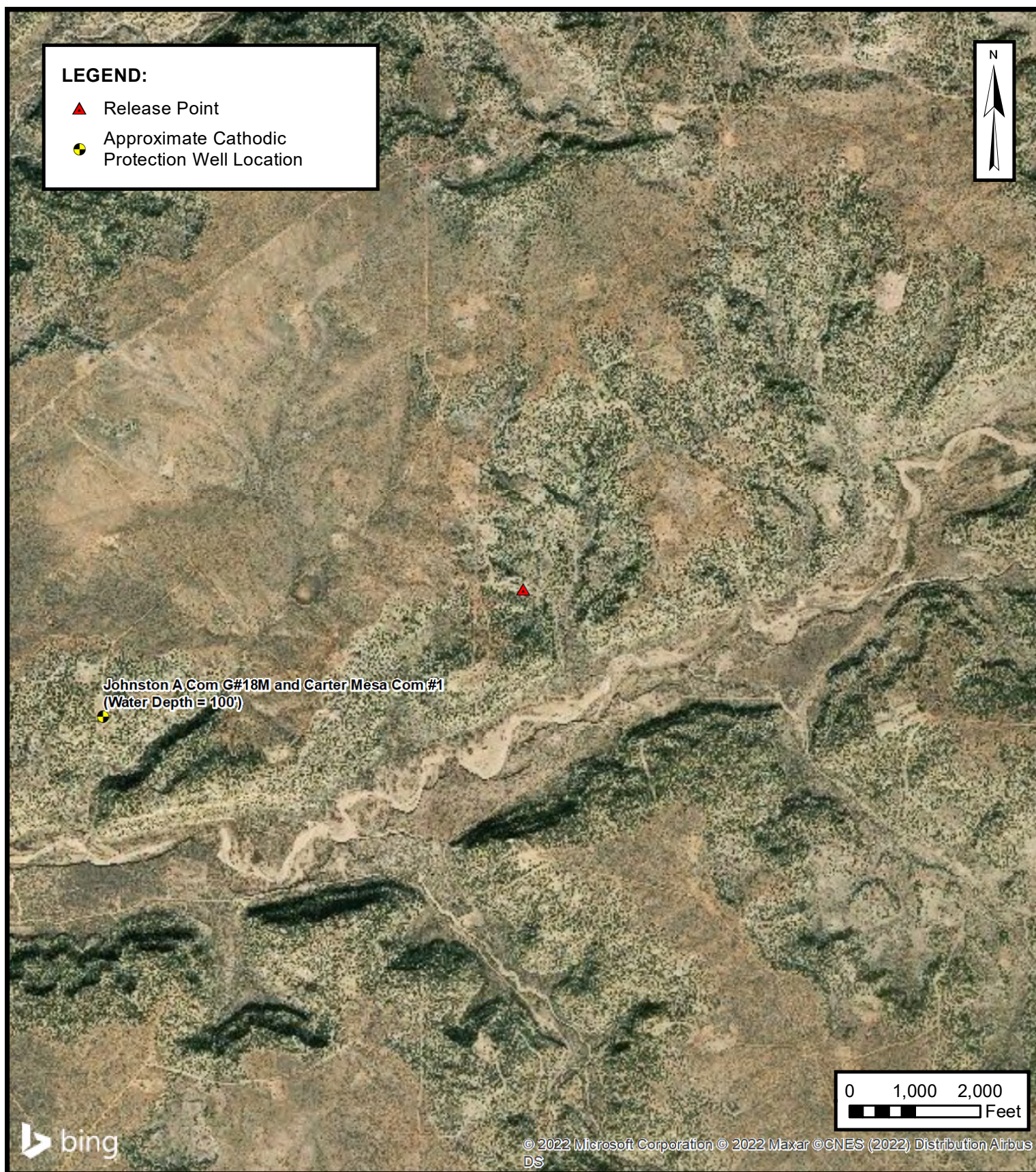
**1.0 MILE RADIUS WATER WELL/ POD LOCATION MAP**

ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

PROJECT NUMBER: 05A1226172

FIGURE**A**

ENSOLUM
Environmental & Hydrogeologic Consultants

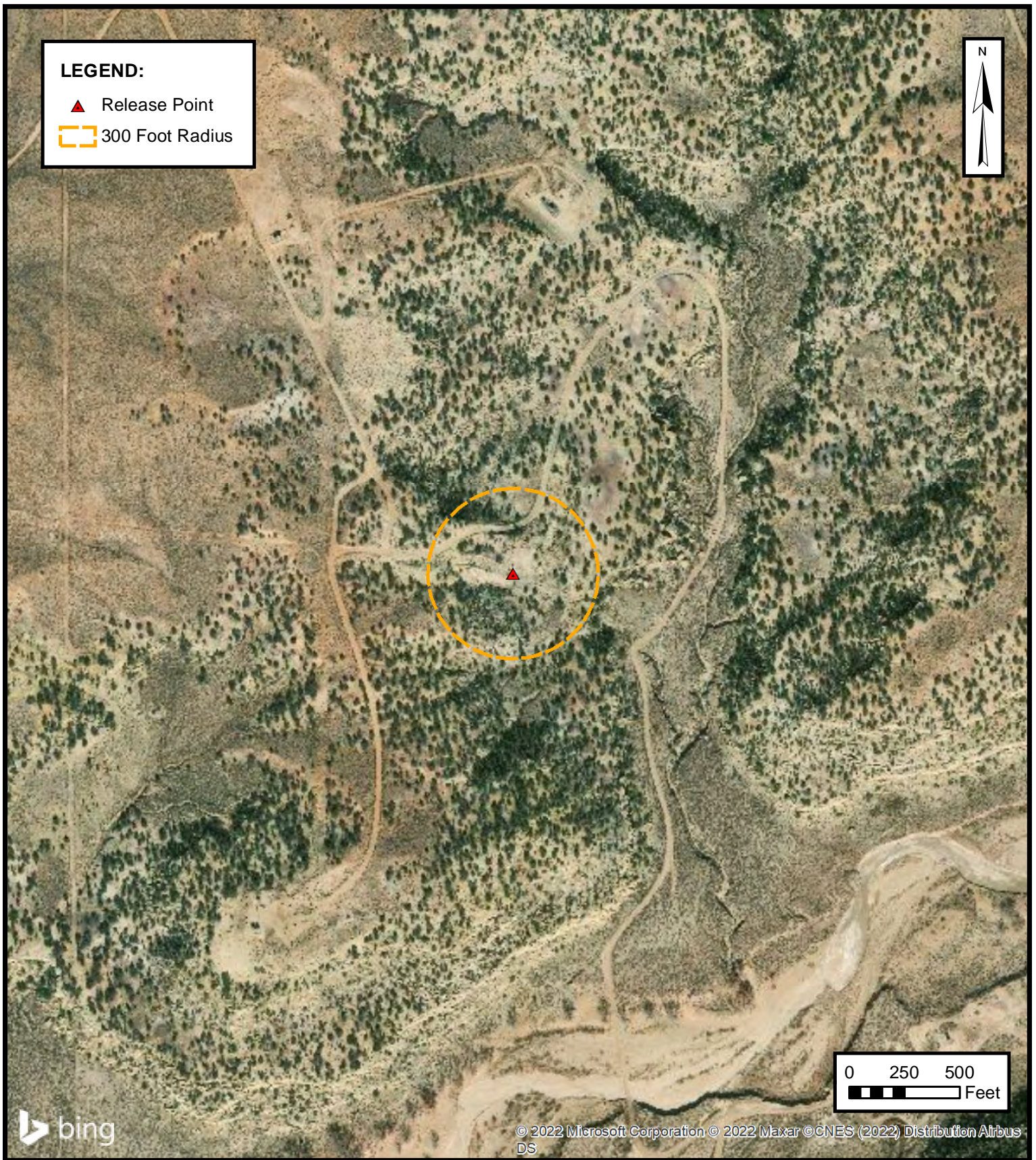


**CATHODIC PROTECTION WELL RECORDED
DEPTH TO WATER**

ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

PROJECT NUMBER: 05A1226172

**FIGURE
B**



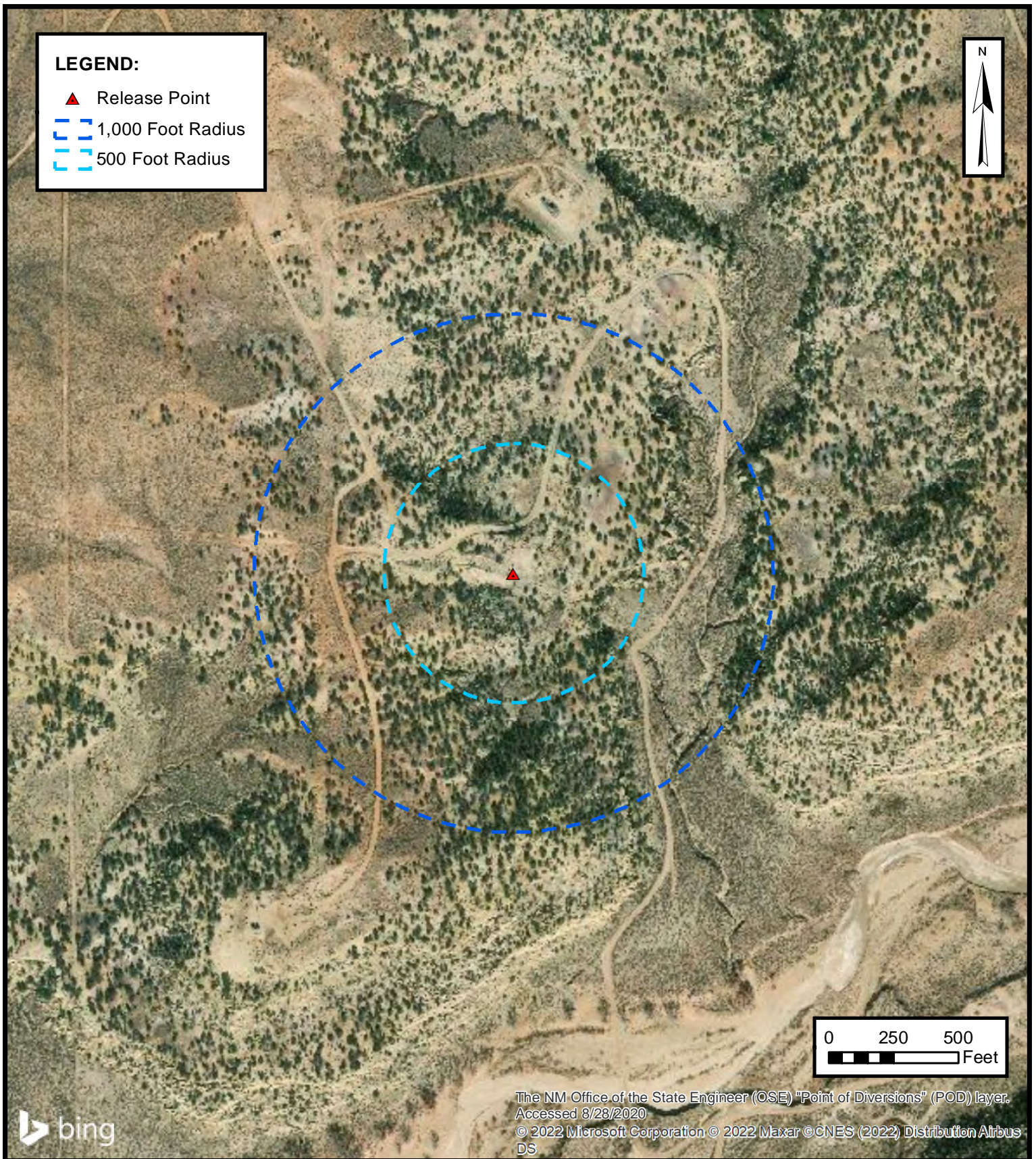


ENSOLUM
Environmental & Hydrogeologic Consultants

**300 FOOT RADIUS
OCCUPIED STRUCTURE IDENTIFICATION**
ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

PROJECT NUMBER: 05A1226172

**FIGURE
D**



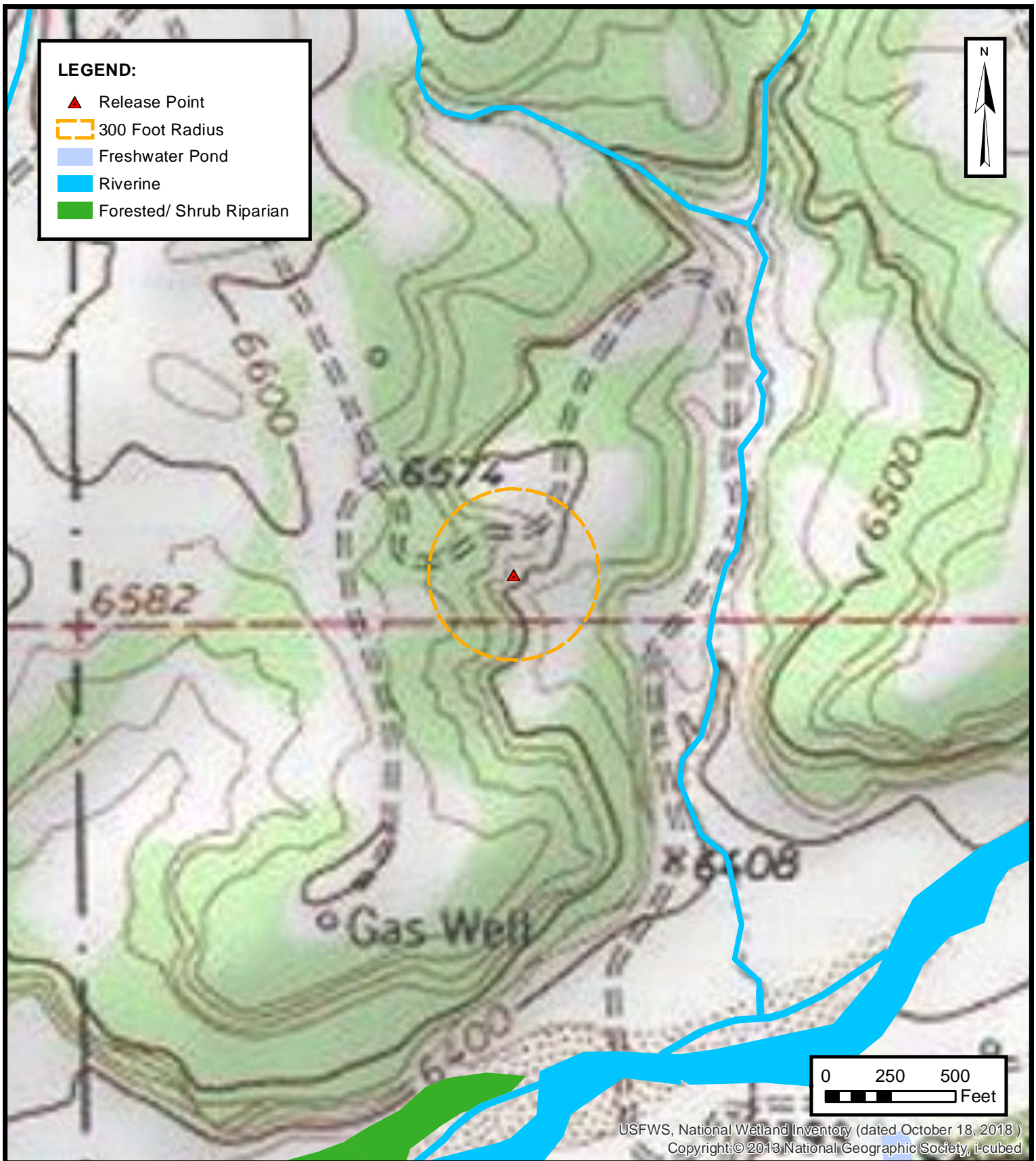
ENSOLUM
Environmental & Hydrogeologic Consultants

WATER WELL AND NATURAL SPRING LOCATION

ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

PROJECT NUMBER: 05A1226172

FIGURE
E



ENSOLUM
Environmental & Hydrogeologic Consultants

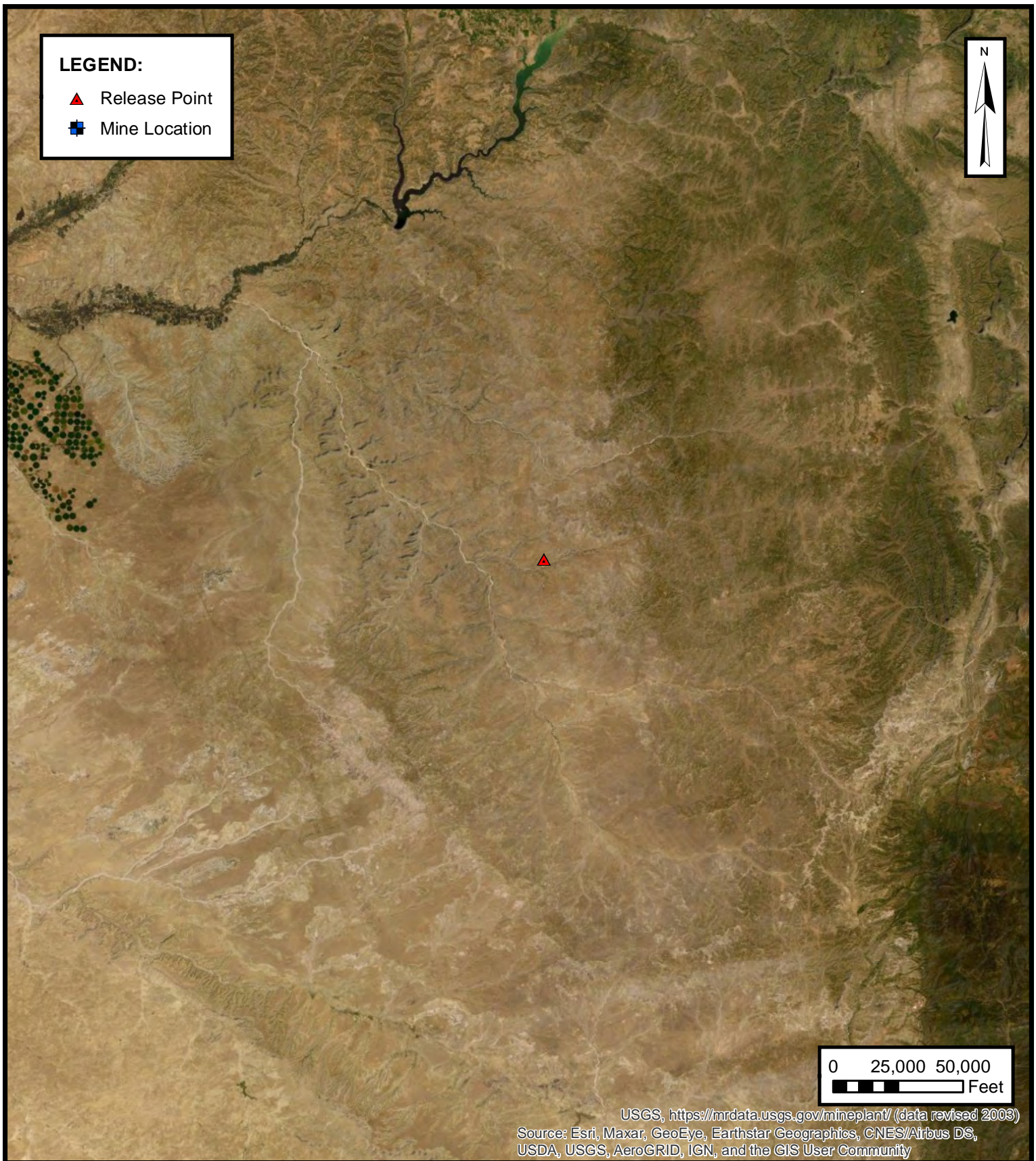
WETLANDS

ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

PROJECT NUMBER: 05A1226172

FIGURE

F



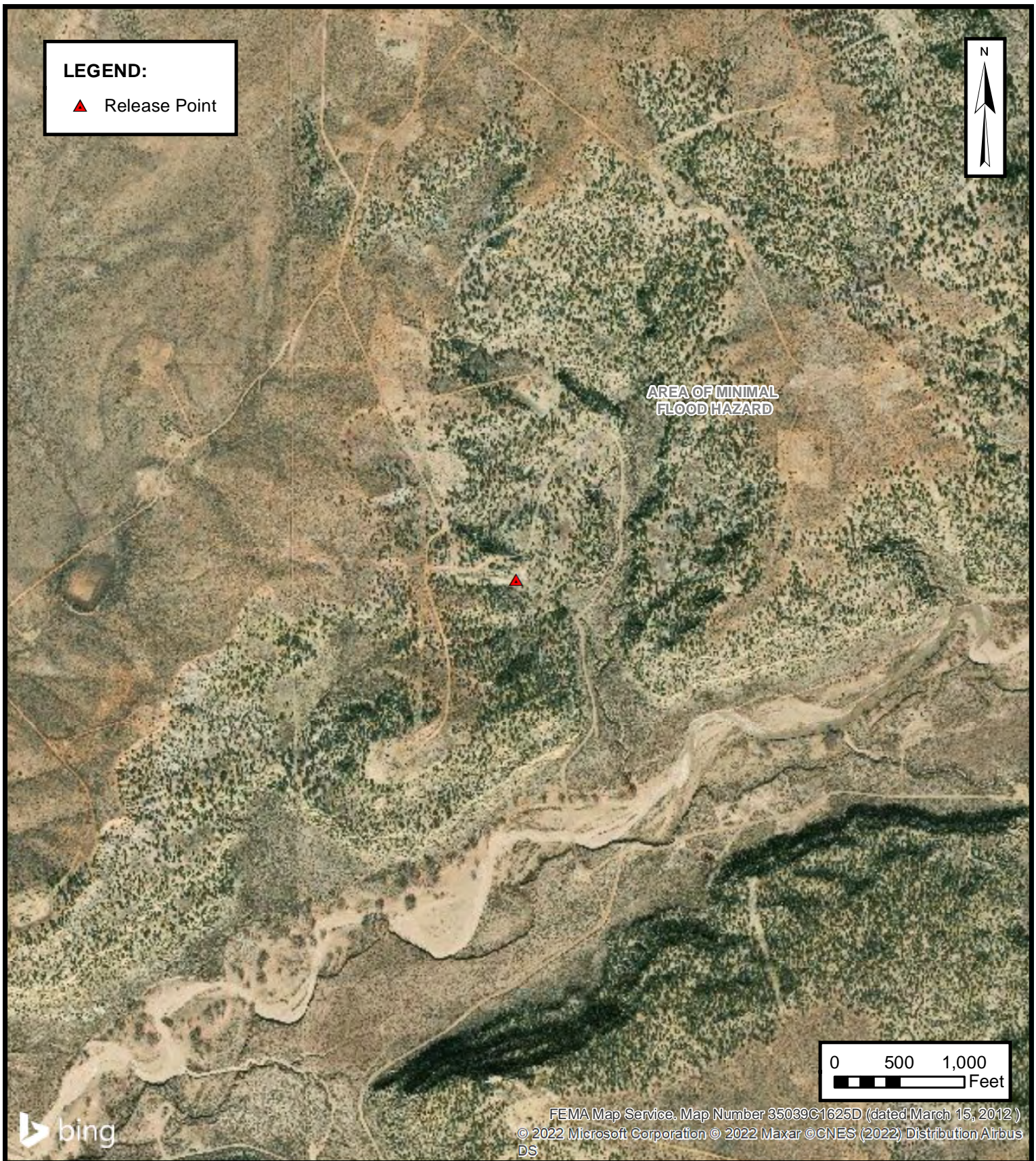
MINES, MILLS AND QUARRIES

ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

PROJECT NUMBER: 05A1226172

FIGURE

G



100-YEAR FLOOD PLAIN MAP

ENTERPRISE FIELD SERVICES, LLC
JICARILLA GAS COM B #1 CH (11/30/21)
Unit Letter N, S30 T26N R5W, Rio Arriba County, New Mexico
36.450981° N, 107.404642° W

PROJECT NUMBER: 05A1226172

FIGURE
H



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 30, 19, 20, 29, 32, 31 **Township:** 26N **Range:** 05W

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

12/1/21 1:29 PM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 25, 24, 36

Township: 26N

Range: 06W

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

12/1/21 1:30 PM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

DATE:

6/7/96

#18M = 30-039-25559

#1 = 30-039-20100

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICOOperator Meridian Oil Inc. Location: Unit NW Sec. 36 Twp 26 Rng 06

Name of Well/Wells or Pipeline Serviced

JOHNSTON A COM G #18M AND CARTER MESA COM #1Elevation _____ Completion Date 6/7/96 Total Depth 438' Land Type FCasing Strings, Sizes, Types & Depths 6 1/2 SET 60' OF 8" PVC CASING.
NO GAS, WATER, OR BOULDERS WERE ENCOUNTERED DURING CASING.If Casing Strings are cemented, show amounts & types used Cemented
WITH 15 SACKS.If Cement or Bentonite Plugs have been placed, show depths & amounts used
NONEDepths & thickness of water zones with description of water: Fresh, Clear,
Salty, Sulphur, Etc. HIT FRESH WATER AT 100'.Depths gas encountered: NONEGround bed depth with type & amount of coke breeze used: 438' Depth.
Used 106 SACKS OF Asbury 218R (5300#)Depths anodes placed: 385', 280', 248', 240', 232', 224', 216', 208', 200', 192', 184', 176', 168', 160', + 152'.Depths vent pipes placed: SURFACE TO 438'.Vent pipe perforations: BOTTOM 300'.

Remarks:

RECEIVED
FEB 14 1997OIL 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

2974-W P/L NAME(S), NUMBER(S) JOHNSTON A Com C*18m and Carter Mesa Com #1
 -2889 TOTAL VOLTS 11.48 AMPS 21.6 - CHMS .531 DATE 6/7/96 NAME JOHN L. Moss
 2116

REMARKS (NOTES FOR CORROSION LOG)

Driller Reported Water AT 100'
 Installed 438' of 1" PE VENT Pipe, WITH THE BOTTOM
 300' Perforated. COKE Breeze To 132'

DEPTH	LOG	ANODE	DEPTH	LOG	ANODE	DEPTH	LOG	ANODE	DEPTH	LOG	ANODE	DEPTH	LOG	ANODE
	ANODE			ANODE			ANODE			ANODE			ANODE	
100			295	.6		490			685					
105			300	.5		495			690					
110			305	.5		500			695					
115			310	.5		505			700					
120			315	.7		510								
125			320	.6		515								
130	1.5		325	.5		520								
135	1.4		330	.5		525			1	385	1.0	2.3		
140	1.6		335	.5		530			2	280	1.6	4.1		
145	1.8		340	.4		535			3	248	1.8	5.4		
150	1.7		345	.5		540			4	240	2.0	5.4		
155	1.7		350	.4		545			5	232	1.7	5.4		
160	2.4		355	.4		550			6	224	1.6	5.5		
165	2.4		360	.4		555			7	216	2.2	6.6		
170	2.4		365	.4		560			8	208	2.7	7.5		
175	2.1		370	.4		565			9	200	2.4	6.8		
180	1.6		375	.5		570			10	192	1.3	5.6		
185	1.8		380	.6		575			11	184	1.7	5.8		
190	1.3		385	1.5		580			12	176	2.2	6.4		
195	1.5		390	.9		585			13	168	2.1	6.8		
200	2.3		395	.4		590			14	160	2.5	6.6		
205	2.6		400	1.4		595			15	152	1.7	5.5		
210	2.7		405	.5		600			16					
215	2.4		410	.4		605			17					
220	1.9		415	.6		610			18					
225	1.5		420	.4		615			19					
230	1.7		425	.4		620			20					
235	1.6		430	.6		625			21					
240	1.5		435	T.D.	438	630			22					
245	1.9		440			635			23					
250	1.3		445			640			24					
255	.7		450			645			25					
260	.6		455			650			26					
265	.8		460			655			27					
270	.7		465			660			28					
275	.6		470			665			29					
280	1.6	2	475			670			30					
285	1.1		480			675								
290	.7		485			680								

DISTRIBUTION - ORIGINAL - DEPARTMENT CPS FILE

Released to Imaging: 5/20/2022 2:52:26 PM - Division Correction Supervisor



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.

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: Chase Truby
AFE: N55724

2. **Originating Site:**
Jicarilla Gas Com B#1 CH

3. **Location of Material (Street Address, City, State or ULSTR):**
UL N Section 30 T26N R5W; 36.450981, -107.404642

Dec 2021 - Jan 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) 647/20 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* 12-9-2021, representative for Enterprise Products Operating authorizes Envirotech, Inc. to complete the required testing/sign the Generator Waste Testing Certification.

Generator Signature

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

5. **Transporter:** Riley Sierra Oil Field Services and Subcontractors L+L, Bailey's, Rosenbaum, CF&M

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 Crubtree

SIGNATURE: *Greg Crubtree*

Surface Waste Management Facility Authorized Agent

TITLE: Enviro Manager

TELEPHONE NO.:

505-632-0615

DATE: 12/9/21



APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Jicarilla Gas Com B #1 CH (11/30/21)
Ensolum Project No. 05A1226172

**Photograph 1**

Photograph Description: View of in process excavation activities.

**Photograph 2**

Photograph Description: View of in process excavation activities.

**Photograph 3**

Photograph Description: View of the final excavation.



SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Jicarilla Gas Com B #1 CH (11/30/21)
Ensolum Project No. 05A1226172

**Photograph 4**

Photograph Description: View of the upper section of the final flow path excavation.

**Photograph 5**

Photograph Description: View of the final flow path excavation. Photo depicts the end (lower section) of the flow path.

**Photograph 6**

Photograph Description: View of the excavation after potassium permanganate application.



SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Jicarilla Gas Com B #1 CH (11/30/21)
Ensolum Project No. 05A1226172

**Photograph 7**

Photograph Description: View of the flow path excavation after potassium permanganate application.

**Photograph 8**

Photograph Description: View of the flow path excavation after potassium permanganate application.

**Photograph 9**

Photograph Description: View of the excavation after initial restoration.



SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Jicarilla Gas Com B #1 CH (11/30/21)
Ensolum Project No. 05A1226172



Photograph 10

Photograph Description: View of a portion of the flow path excavation after initial restoration.





APPENDIX E

Regulatory Correspondence

From: [Long, Thomas](#)
To: [Kyle Summers](#); [Chad D'Aponti](#)
Subject: FW: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W; 36.450981, -107.404642
Date: Wednesday, January 26, 2022 7:54:04 AM
Attachments: [image001.jpg](#)

FYI

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

logo



From: Long, Thomas
Sent: Wednesday, January 26, 2022 7:14 AM
To: Truby, Chase <CCTruby@eprod.com>; Roberts, Brian <bvroberts@eprod.com>
Cc: Marquis, James <JMarquis@eprod.com>
Subject: FW: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W; 36.450981, -107.404642

All,

See the Jicarilla approval 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

logo



From: Yahoo Warning <kcmanwell@yahoo.com>
Sent: Tuesday, January 25, 2022 9:56 PM
To: Long, Thomas <tjlong@eprod.com>

Subject: Re: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W; 36.450981, -107.404642

[Use caution with links/attachments]

Tom Long,

After review of laboratory results for Jicarilla Gas Com B #1 CH, as previously mentioned the application of potassium Permanganate will be applied on the excavated location, with continued applications along the existing flow path. During all sampling procedures we have encountered bedrock, due to JANEPO stipulations approval has been granted for application of potassium Permanganate throughout entire contamination sites. I plan to be there during application. Thank You for your continued response during this process, any questions or Comments please contact Myself @ [505-330-8031](tel:505-330-8031).

Thank You,
K.C. Manwell

On Tuesday, January 25, 2022, 04:53:27 PM MST, Long, Thomas <tjlong@eprod.com> wrote:

Keith,

Please find the attached site sketch and lab report for the Jicarilla Gas Com B #1 CH excavation and flow path. Samples S-19 and S-20 in the excavation exceed the 100 ppm TPH standard. Flow path samples FP-1 through FP-3 exceed the 100 ppm TPH standard as well. I believe the flow path samples are on bedrock sandstone. We are scheduled to apply the potassium permanganate solution to the excavation tomorrow. Shall we also apply it to the areas of the flow path that have exceedances as well? Please let me know your thoughts on how you want to proceed. 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

logo



From: Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Sent: Monday, January 24, 2022 12:12 PM
To: Long, Thomas <tjlong@eprod.com>
Subject: RE: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W;
36.450981, -107.404642

[Use caution with links/attachments]

Thank you for the notification, Tom.

Nelson Velez • Environmental Specialist - Adv

Environmental Bureau | EMNRD - Oil Conservation Division

1000 Rio Brazos Road | Aztec, NM 87410

(505) 469-6146 | nelson.velez@state.nm.us

From: Long, Thomas <tjlong@eprod.com>
Sent: Monday, January 24, 2022 12:08 PM
To: Yahoo Warning <kcmannwell@yahoo.com>
Cc: Stone, Brian <bmstone@eprod.com>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: RE: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W;
36.450981, -107.404642

Keith,

This email is a notification that Enterprise will be applying the potassium permanganate solution to the excavation at the Jicarilla Gas Com B #1 CH tomorrow, January 25, 2020 at 0930. 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



From: Yahoo Warning <kcmanwell@yahoo.com>
Sent: Friday, January 21, 2022 9:15 AM
To: Long, Thomas <tjlong@eprod.com>
Subject: Re: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W;
36.450981, -107.404642

[Use caution with links/attachments]

Thomas Long,

After review of laboratory results for Jicarilla Gas Com B #1, the results are above Jicarilla Standards. As a result of stipulations under JANEPO, approval is granted for Conditional Closure. Due to conditions encountered as solid bedrock and potential for a landslide, JANEPO has agreed with proposed plan for application of Potassium Permanganate and backfill of existing excavation. As agreed with Enterprise and JANEPO, a berm will be constructed on existing road to prevent erosion to the excavated location. Causing erosion of backfill, contamination and Potassium Permanganate to possibly migrate. Any questions or Comments, contact Myself at 505-330-8031.

Thank You,
K.C. Manwell

On Friday, January 21, 2022, 07:39:28 AM MST, Long, Thomas <tjlong@eprod.com> wrote:

Keith,

Please find the attached site sketch and lab report for the Jicarilla Gas Com B #1 CH excavation. The following samples exceed the NMOCD remediation standard:

S-7 with 276.6 ppm BTEX and 3,840 ppm TPH – Depth at 18 feet bgs; encountered hard sandstone

S-8 with 14 ppm Benzene, 689 ppm BTEX and 6,800 ppm TPH - Depth at 18 feet bgs; encountered hard sandstone; Report has an E Flag, waiting on rerun.

S-10 with 323 ppm TPH – West Wall at 18 feet bgs

S-11 with 189 ppm TPH – Southwest Wall 12-18' bgs

S-14 with 4,600 ppm Chloride – Not sure on this analysis. Report has an E flag, waiting on rerun. We are also collecting a background sample.

S-16 with 127 PPM TPH at 0-6 feet bgs

As in previous discussions with you onsite and over the phone, we are at a point at which we cannot excavate deeper as that we have encountered hard sandstone. We also cannot excavate more laterally as that in may cause an unsafe situation of collapse or landslide because we are undermining the hill.

Enterprise requests to treat the entire excavation with a potassium permanganate solution and then backfill the excavation with native Jicarilla soils. Enterprise will continue remediation of the flow path of the spill by excavating the contaminant mass. Please acknowledge acceptance of this 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

logo



From: Yahoo Warning <kcmanwell@yahoo.com>

Sent: Thursday, January 6, 2022 3:01 PM

To: Long, Thomas <tjlong@eprod.com>

Subject: Re: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W;
36.450981, -107.404642

[Use caution with links/attachments]

Thomas Long,

Your request for a larger track hoe is granted approval by JAN-EPO, keep in mind the arch survey and cost involve with surface disturbance from BIA. Keep in touch for any amendments to the plan.

Thank You,

K.C. Manwell

On Thursday, January 6, 2022, 08:16:59 AM MST, Long, Thomas <tjlong@eprod.com> wrote:

Kurt/Keith,

After discussion with the field crew and contractor, it was determined that a larger track hoe would be required to continue the remediation efforts by excavating. Enterprise requests permission to mobilize a larger track hoe to complete the remediation of this release. Enterprise will keep the requested track hoe on the previously disturbed areas to access the release site in order minimized any further land disturbance. Please acknowledge acceptance of this 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

logo



From: Sandoval, Kurt <Kurt.Sandoval@bia.gov>

Sent: Monday, January 3, 2022 8:11 AM

To: Long, Thomas <tjlong@eprod.com>; Yahoo Warning <kcmanwell@yahoo.com>; kurt.sandoval97 <kurt.sandoval97@gmail.com>

Cc: Stone, Brian <bmstone@eprod.com>; 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>

Subject: Re: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W; 36.450981, -107.404642

[Use caution with links/attachments]

Plan is acceptable.

From: Long, Thomas <tjlong@eprod.com>

Sent: Tuesday, December 28, 2021 11:57 AM

To: Yahoo Warning <kcmanwell@yahoo.com>; Sandoval, Kurt <Kurt.Sandoval@bia.gov>; kurt.sandoval97 <kurt.sandoval97@gmail.com>

Cc: Stone, Brian <bmstone@eprod.com>; 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)'

<Cory.Smith@state.nm.us>

Subject: FW: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W;
36.450981, -107.404642

Keith/Kurt,

Please find the attached site sketch and lab report for the Jicarilla Gas Com B#1 CH excavation. The following soil sample results exceed the NMOCD Tier I remediation standard: S-3 (Base) with 108 ppm BTEX and 1,220 ppm TPH, S-4 with 331 ppm TPH, S-5 with 310 ppm TPH and S-6 with 128 ppm TPH. I think there is a good chance we can remediate the entire release in this area. I propose we continue excavating until the field screening results have decreased and then resample the entire excavation. I propose we hold off with the in-situ treatment with potassium permanganate until we give it another attempt with excavating the contaminant mass. Please acknowledge acceptance of these proposed activities. 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

logo



From: Long, Thomas

Sent: Tuesday, December 14, 2021 7:33 AM

To: Yahoo Warning <kcmannwell@yahoo.com>

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

Subject: RE: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W;
36.450981, -107.404642

Keith,

This is a follow up to our phone conversation earlier. Enterprise is requesting to use a track hoe equipped with rubber tracks to continue the repairs and remediation activities that the Jicarilla Gas Com B #1 CH release site. Please acknowledge acceptance of this request.

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

logo



From: kurt.sandoval97 <kurt.sandoval97@gmail.com>

Sent: Thursday, December 2, 2021 9:45 PM

To: Long, Thomas <tjlong@eprod.com>; Yahoo Warning <kcmanwell@yahoo.com>;
janthpo@gmail.com; kurt.sandoval@bia.gov

Cc: Stone, Brian <bmstone@eprod.com>; McDowell, Jack <JLMCDOWELL@eprod.com>; Truby, Chase
<CCTruby@eprod.com>; Marquis, James <JMarquis@eprod.com>

Subject: [EXTERNAL] RE: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W; 36.450981,
-107.404642

[Use caution with links/attachments]

Plan is acceptable. When is the start date? Thank you for the opportunity to comment. Be careful and safe .

Sent via the Samsung Galaxy S10, an AT&T 5G Evolution capable smartphone

----- Original message -----

From: "Long, Thomas" <tjlong@eprod.com>

Date: 12/2/21 2:33 PM (GMT-07:00)

To: Yahoo Warning <kcmanwell@yahoo.com>, janthpo@gmail.com, kurt.sandoval97@gmail.com, kurt.sandoval@bia.gov

Cc: "Stone, Brian" <bmstone@eprod.com>, "McDowell, Jack" <JLMCDOWELL@eprod.com>, "Truby, Chase" <CCTruby@eprod.com>, "Marquis, James" <JMarquis@eprod.com>

Subject: FW: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W; 36.450981, -107.404642

Keith/Kurt,

Please find the attached remediation plan for the Jicarilla Gas Com B#1 CH release site. Please let me know if this will suffice. 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

From: Long, Thomas

Sent: Wednesday, December 1, 2021 7:24 AM

To: 'Yahoo Warning' <kcmanwell@yahoo.com>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: Jicarilla Gas Com B #1 CH - UL N Section 30 T26N R5W; 36.450981, -107.404642

Keith,

This email is a notification that Enterprise had a release of natural gas and natural gas liquids on the Jicarilla Gas Com B #1 CH pipeline yesterday, November 30, 2021 at approximately 3:00 p.m. Natural liquids flowed down a ravine/drainage. No washes were affected. The release is located at UL N Section 30 T26N R5W; 36.450981, -107.404642. I will keep you informed as to when the remediation will begin.

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

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



APPENDIX F

Table 1 – Soil Analytical Summary



TABLE 1
Jicarilla Gas Com B #1 CH (11/30/21)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX ¹	TPH GRO	TPH DRO	TPH MRO	Total Combined TPH (GRO/DRO/MRO) ¹	Chloride
		C- Composite G - Grab	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria (Tier I)				10	NE	NE	NE	50				100	600
Composite Soil Samples Removed by Excavation and Transported to the Landfarm for Diposal/Remediation													
S-1	12.16.21	C	0 to 3	<0.024	<0.047	<0.047	<0.095	ND	<4.7	<10	<50	ND	<60
S-2	12.16.21	C	0 to 3	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<9.6	<48	ND	<60
S-3	12.22.21	C	10	1.3	30	6.6	70	110	990	230	<47	1,200	<60
S-4	12.22.21	C	0 to 10	0.11	0.66	0.36	4.2	5.3	81	250	<47	330	<60
S-5	12.22.21	C	0 to 7	0.17	2.7	1.0	12	16	170	140	<50	310	<59
S-6	12.22.21	C	0 to 10	0.14	1.5	0.48	5.3	7.4	73	55	<47	130	<60
Excavation Composite Soil Samples													
S-7	1.19.22	C	20	5.6	70	21	180	280	2,900	940	<50	3,800	<60
S-8	1.19.22	C	18	14	180	47	390	630	6,400	1,000	<470	7,400	<60
S-9	1.19.22	C	0 to 9	<0.023	0.091	<0.046	0.20	0.29	<4.6	<9.5	<47	ND	<60
S-10	1.19.22	C	9 to 18	<0.096	0.35	0.29	2.5	3.1	63	260	<47	320	<60
S-11	1.19.22	C	12 to 18	<0.11	1.1	0.81	6.3	8.2	110	79	<45	190	<60
S-12	1.19.22	C	6 to 12	<0.085	<0.17	<0.17	0.34	0.34	<17	20	<49	20	80
S-13	1.19.22	C	0 to 6	<0.018	<0.037	<0.037	<0.074	ND	<3.7	14	<48	14	72
S-14	1.19.22	C	12 to 20	<0.10	0.22	<0.21	1.1	1.3	<21	44	<50	44	4,100
S-15	1.19.22	C	6 to 12	<0.11	<0.21	<0.21	<0.42	ND	<21	19	<49	19	<60
S-16	1.19.22	C	0 to 6	<0.094	0.35	0.48	3.8	4.6	72	55	<50	130	<60
S-17	1.19.22	C	8 to 16	<0.089	0.32	<0.18	1.4	1.7	25	26	<50	51	<60
S-18	1.19.22	C	0 to 8	<0.093	<0.19	<0.19	<0.37	ND	<19	10	<46	10	<61
S-19	1.24.22	C	18	0.39	14	3.7	42	60	550	310	<48	860	<60
S-20	1.24.22	C	18	<0.099	0.53	<0.20	2.2	2.7	60	260	<48	320	71
S-21	1.24.22	C	0 to 12	<0.10	<0.20	<0.20	<0.40	ND	<20	<9.1	<45	ND	200
S-22	1.24.22	C	0 to 12	<0.11	<0.23	<0.23	1.1	1.1	<23	28	<48	28	69



TABLE 1
Jicarilla Gas Com B #1 CH (11/30/21)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX ¹	TPH GRO	TPH DRO	TPH MRO	Total Combined TPH (GRO/DRO/MRO) ¹	Chloride
		C- Composite G - Grab	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria (Tier I)				10	NE	NE	NE	50				100	600
Composite Soil Samples Collected from the Flow Path													
FP-1	1.24.22	C	1	0.33	22	5.2	140	170	2,200	700	<50	2,900	75
FP-2	1.24.22	C	1	<0.099	<0.20	<0.20	5.4	5.4	190	1,500	<490	1,700	340
FP-3	1.24.22	C	0.5	<0.12	2.3	1.5	22	26	380	920	60	1,400	<60
FP-4	1.24.22	C	0.5	<0.021	<0.042	<0.042	0.17	0.17	<4.2	10	<50	10	<60
FP-5	1.24.22	C	0.5	<0.021	<0.042	<0.042	<0.084	ND	<4.2	<9.3	<46	ND	<60

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

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

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

NA = Not Analyzed

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbons

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics



APPENDIX G

Laboratory Data Sheets & Chain of Custody Documentation



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

December 27, 2021

Kyle Summers

ENSOLUM

606 S. Rio Grande Suite A

Aztec, NM 87410

TEL: (903) 821-5603

FAX:

RE: Jicarilla Gas Com B1 EH

OrderNo.: 2112B13

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/17/2021 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2112B13

Date Reported: 12/27/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-1

Project: Jicarilla Gas Com B1 EH

Collection Date: 12/16/2021 9:30:00 AM

Lab ID: 2112B13-001

Matrix: SOIL

Received Date: 12/17/2021 7:31:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	ND	60		mg/Kg	20	12/21/2021 8:50:26 AM	64644
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/20/2021 11:46:07 AM	64609
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/20/2021 11:46:07 AM	64609
Surr: DNOP	90.6	70-130		%Rec	1	12/20/2021 11:46:07 AM	64609
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/18/2021 5:06:00 PM	64595
Surr: BFB	93.4	70-130		%Rec	1	12/18/2021 5:06:00 PM	64595
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.024		mg/Kg	1	12/18/2021 5:06:00 PM	64595
Toluene	ND	0.047		mg/Kg	1	12/18/2021 5:06:00 PM	64595
Ethylbenzene	ND	0.047		mg/Kg	1	12/18/2021 5:06:00 PM	64595
Xylenes, Total	ND	0.095		mg/Kg	1	12/18/2021 5:06:00 PM	64595
Surr: 4-Bromofluorobenzene	80.4	70-130		%Rec	1	12/18/2021 5:06:00 PM	64595

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

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

Analytical Report

Lab Order 2112B13

Date Reported: 12/27/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-2

Project: Jicarilla Gas Com B1 EH

Collection Date: 12/16/2021 9:35:00 AM

Lab ID: 2112B13-002

Matrix: SOIL

Received Date: 12/17/2021 7:31:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	ND	60		mg/Kg	20	12/21/2021 9:27:40 AM	64644
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/20/2021 11:58:49 AM	64609
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/20/2021 11:58:49 AM	64609
Surr: DNOP	86.0	70-130		%Rec	1	12/20/2021 11:58:49 AM	64609
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/18/2021 5:25:00 PM	64595
Surr: BFB	90.3	70-130		%Rec	1	12/18/2021 5:25:00 PM	64595
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.025		mg/Kg	1	12/18/2021 5:25:00 PM	64595
Toluene	ND	0.049		mg/Kg	1	12/18/2021 5:25:00 PM	64595
Ethylbenzene	ND	0.049		mg/Kg	1	12/18/2021 5:25:00 PM	64595
Xylenes, Total	ND	0.098		mg/Kg	1	12/18/2021 5:25:00 PM	64595
Surr: 4-Bromofluorobenzene	78.7	70-130		%Rec	1	12/18/2021 5:25:00 PM	64595

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

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

Page 2 of 6

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112B13

27-Dec-21

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 EH

Sample ID: MB-64644	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 64644	RunNo: 84672								
Prep Date: 12/20/2021	Analysis Date: 12/20/2021	SeqNo: 2977717	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-64644	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 64644	RunNo: 84672								
Prep Date: 12/20/2021	Analysis Date: 12/20/2021	SeqNo: 2977718	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

Qualifiers:

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

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

Page 3 of 6

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112B13

27-Dec-21

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 EH

Sample ID: MB-64609	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 64609	RunNo: 84660								
Prep Date: 12/20/2021	Analysis Date: 12/20/2021	SeqNo: 2976310 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.4	70	130			

Sample ID: LCS-64609	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 64609	RunNo: 84660								
Prep Date: 12/20/2021	Analysis Date: 12/20/2021	SeqNo: 2976311 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.00	0	110	68.9	135			
Surr: DNOP	4.2		5.000		83.9	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 Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

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

Page 4 of 6

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112B13

27-Dec-21

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 EH

Sample ID: mb-64595	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 64595	RunNo: 84644								
Prep Date: 12/17/2021	Analysis Date: 12/18/2021	SeqNo: 2975896	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	960		1000		96.3	70	130			

Sample ID: lcs-64595	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 64595	RunNo: 84644								
Prep Date: 12/17/2021	Analysis Date: 12/18/2021	SeqNo: 2975898	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	78.6	131			
Surr: BFB	1200		1000		119	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 Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112B13

27-Dec-21

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 EH

Sample ID: mb-64595	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 64595	RunNo: 84644								
Prep Date: 12/17/2021	Analysis Date: 12/18/2021	SeqNo: 2975944	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	0.88		1.000		87.5	70	130			

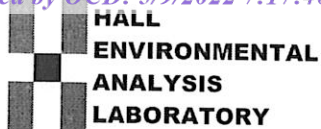
Sample ID: lcs-64595	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 64595	RunNo: 84644								
Prep Date: 12/17/2021	Analysis Date: 12/18/2021	SeqNo: 2975946	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.0	80	120			
Toluene	0.92	0.050	1.000	0	92.0	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.1	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.6	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.9	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 Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

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

Page 6 of 6



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

Sample Log-In Check List

Client Name: ENSOLUM

Work Order Number: 2112B13

RcptNo: 1

Received By: Tracy Casarrubias 12/17/2021 7:31:00 AM

Completed By: Tracy Casarrubias 12/17/2021 8:38:24 AM

Reviewed By: KPG 12/17/21

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: JN 12/17/21

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

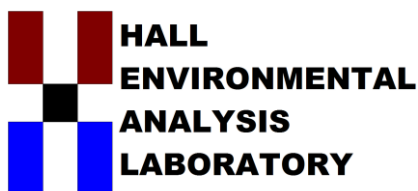
Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			



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

January 26, 2022

Kyle Summers

ENSOLUM

606 S. Rio Grande Suite A

Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Jicarilla Gas Com B1 CH

OrderNo.: 2112D29

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/23/2021 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 30, 2021.

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. 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. All samples are reported as received unless otherwise indicated.

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,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2112D29

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-3

Project: Jicarilla Gas Com B1 CH

Collection Date: 12/22/2021 11:00:00 AM

Lab ID: 2112D29-001

Matrix: MEOH (SOIL)

Received Date: 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	ND	60		mg/Kg	20	12/27/2021 6:43:48 PM	64737
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	230	9.4		mg/Kg	1	12/27/2021 1:20:07 PM	64721
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/27/2021 1:20:07 PM	64721
Surr: DNOP	89.2	70-130		%Rec	1	12/27/2021 1:20:07 PM	64721
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	990	68		mg/Kg	20	12/23/2021 8:05:22 PM	64694
Surr: BFB	233	70-130	S	%Rec	20	12/23/2021 8:05:22 PM	64694
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	1.3	0.34		mg/Kg	20	12/23/2021 8:05:22 PM	64694
Toluene	30	0.68		mg/Kg	20	12/23/2021 8:05:22 PM	64694
Ethylbenzene	6.6	0.68		mg/Kg	20	12/23/2021 8:05:22 PM	64694
Xylenes, Total	70	1.4		mg/Kg	20	12/23/2021 8:05:22 PM	64694
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	20	12/23/2021 8:05:22 PM	64694

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 8

Analytical Report

Lab Order 2112D29

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-4

Project: Jicarilla Gas Com B1 CH

Collection Date: 12/22/2021 11:05:00 AM

Lab ID: 2112D29-002

Matrix: MEOH (SOIL)

Received Date: 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	ND	60		mg/Kg	20	12/27/2021 7:20:52 PM	64737
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	250	9.3		mg/Kg	1	12/27/2021 1:30:35 PM	64721
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/27/2021 1:30:35 PM	64721
Surr: DNOP	95.9	70-130		%Rec	1	12/27/2021 1:30:35 PM	64721
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	81	20		mg/Kg	5	12/28/2021 9:18:59 AM	64736
Surr: BFB	211	70-130	S	%Rec	5	12/28/2021 9:18:59 AM	64736
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.11	0.099		mg/Kg	5	12/28/2021 9:18:59 AM	64736
Toluene	0.66	0.20		mg/Kg	5	12/28/2021 9:18:59 AM	64736
Ethylbenzene	0.36	0.20		mg/Kg	5	12/28/2021 9:18:59 AM	64736
Xylenes, Total	4.2	0.40		mg/Kg	5	12/28/2021 9:18:59 AM	64736
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	5	12/28/2021 9:18:59 AM	64736

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2112D29

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-5

Project: Jicarilla Gas Com B1 CH

Collection Date: 12/22/2021 11:10:00 AM

Lab ID: 2112D29-003

Matrix: MEOH (SOIL)

Received Date: 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	ND	59		mg/Kg	20	12/27/2021 7:33:12 PM	64737
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	140	10		mg/Kg	1	12/27/2021 1:41:06 PM	64721
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/27/2021 1:41:06 PM	64721
Surr: DNOP	89.0	70-130		%Rec	1	12/27/2021 1:41:06 PM	64721
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	170	21		mg/Kg	5	12/28/2021 9:42:34 AM	64736
Surr: BFB	253	70-130	S	%Rec	5	12/28/2021 9:42:34 AM	64736
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.17	0.11		mg/Kg	5	12/28/2021 9:42:34 AM	64736
Toluene	2.7	0.21		mg/Kg	5	12/28/2021 9:42:34 AM	64736
Ethylbenzene	1.0	0.21		mg/Kg	5	12/28/2021 9:42:34 AM	64736
Xylenes, Total	12	0.42		mg/Kg	5	12/28/2021 9:42:34 AM	64736
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	5	12/28/2021 9:42:34 AM	64736

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2112D29

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-6

Project: Jicarilla Gas Com B1 CH

Collection Date: 12/22/2021 11:15:00 AM

Lab ID: 2112D29-004

Matrix: MEOH (SOIL)

Received Date: 12/23/2021 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	ND	60		mg/Kg	20	12/27/2021 7:45:34 PM	64737
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	55	9.4		mg/Kg	1	12/27/2021 1:51:38 PM	64721
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/27/2021 1:51:38 PM	64721
Surr: DNOP	97.0	70-130		%Rec	1	12/27/2021 1:51:38 PM	64721
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	73	18		mg/Kg	5	12/28/2021 10:06:05 AM	64736
Surr: BFB	165	70-130	S	%Rec	5	12/28/2021 10:06:05 AM	64736
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.14	0.091		mg/Kg	5	12/28/2021 10:06:05 AM	64736
Toluene	1.5	0.18		mg/Kg	5	12/28/2021 10:06:05 AM	64736
Ethylbenzene	0.48	0.18		mg/Kg	5	12/28/2021 10:06:05 AM	64736
Xylenes, Total	5.3	0.36		mg/Kg	5	12/28/2021 10:06:05 AM	64736
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	5	12/28/2021 10:06:05 AM	64736

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2112D29

26-Jan-22

Client: ENSOLUM

Project: Jicarilla Gas Com B1 CH

Sample ID: MB-64737	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 64737	RunNo: 84790								
Prep Date: 12/27/2021	Analysis Date: 12/27/2021	SeqNo: 2983088	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-64737	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 64737	RunNo: 84790								
Prep Date: 12/27/2021	Analysis Date: 12/27/2021	SeqNo: 2983089	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

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 Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Page 5 of 8

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112D29

26-Jan-22

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 CH

Sample ID: LCS-64721	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 64721			RunNo: 84779						
Prep Date: 12/23/2021	Analysis Date: 12/27/2021			SeqNo: 2982379	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.1	68.9	135			
Surr: DNOP	4.5		5.000		89.8	70	130			

Sample ID: MB-64721	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 64721			RunNo: 84779						
Prep Date: 12/23/2021	Analysis Date: 12/27/2021			SeqNo: 2982382	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		95.2	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 Quantitative 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

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112D29

26-Jan-22

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 CH

Sample ID: ics-64694	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 64694	RunNo: 84776								
Prep Date: 12/22/2021	Analysis Date: 12/23/2021	SeqNo: 2981531 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	115	78.6	131			
Surr: BFB	1200		1000		124	70	130			

Sample ID: mb-64694	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 64694	RunNo: 84776								
Prep Date: 12/22/2021	Analysis Date: 12/23/2021	SeqNo: 2981533 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	920		1000		92.1	70	130			

Sample ID: mb-64736	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 64736	RunNo: 84801								
Prep Date: 12/27/2021	Analysis Date: 12/28/2021	SeqNo: 2983402 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	970		1000		97.4	70	130			

Sample ID: ics-64736	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 64736	RunNo: 84801								
Prep Date: 12/27/2021	Analysis Date: 12/28/2021	SeqNo: 2983403 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	78.6	131			
Surr: BFB	1100		1000		109	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 Quantitative 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#: 2112D29

26-Jan-22

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 CH

Sample ID: LCS-64694	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 64694	RunNo: 84776								
Prep Date: 12/22/2021	Analysis Date: 12/23/2021	SeqNo: 2981610 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.1	80	120			
Toluene	0.94	0.050	1.000	0	94.4	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.2	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.3	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

Sample ID: mb-64694	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 64694	RunNo: 84776								
Prep Date: 12/22/2021	Analysis Date: 12/23/2021	SeqNo: 2981612 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	70	130			

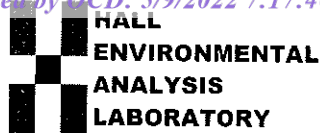
Sample ID: mb-64736	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 64736	RunNo: 84801								
Prep Date: 12/27/2021	Analysis Date: 12/28/2021	SeqNo: 2983430 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	70	130			

Sample ID: LCS-64736	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 64736	RunNo: 84801								
Prep Date: 12/27/2021	Analysis Date: 12/28/2021	SeqNo: 2983431 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	100	80	120			
Toluene	0.99	0.050	1.000	0	99.5	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.2	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.3	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	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 Quantitative 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
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: ENSOLUM

Work Order Number: 2112D29

RcptNo: 1

Received By: Isaiah Ortiz 12/23/2021 7:40:00 AM

Completed By: Isaiah Ortiz 12/23/2021 8:13:26 AM

Reviewed By: KPG 12/23/21

I. Ortiz

I. Ortiz

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 $>0^{\circ}\text{C}$ 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: JO 12/23/21

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

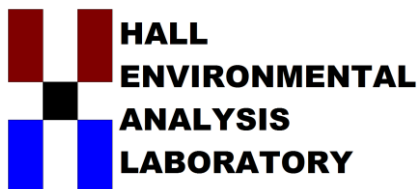
Regarding: _____

Client Instructions: _____

16. Additional remarks: _____

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			



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

January 26, 2022

Kyle Summers

ENSOLUM

606 S. Rio Grande Suite A

Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Jicarilla GasCom B1 CH

OrderNo.: 2201769

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 12 sample(s) on 1/20/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued January 25, 2022.

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. 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. All samples are reported as received unless otherwise indicated.

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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-7

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 9:30:00 AM

Lab ID: 2201769-001

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/20/2022 11:48:27 AM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	940	10		mg/Kg	1	1/20/2022 10:39:03 AM	65116
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/20/2022 10:39:03 AM	65116
Surr: DNOP	71.7	51.1-141		%Rec	1	1/20/2022 10:39:03 AM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	2900	220		mg/Kg	50	1/20/2022 1:50:00 PM	R85281
Surr: BFB	273	70-130	S	%Rec	50	1/20/2022 1:50:00 PM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	5.6	0.11		mg/Kg	5	1/20/2022 9:35:00 AM	R85281
Toluene	70	2.2		mg/Kg	50	1/20/2022 1:50:00 PM	R85281
Ethylbenzene	21	0.22		mg/Kg	5	1/20/2022 9:35:00 AM	R85281
Xylenes, Total	180	4.4		mg/Kg	50	1/20/2022 1:50:00 PM	R85281
Surr: 4-Bromofluorobenzene	134	70-130	S	%Rec	50	1/20/2022 1:50:00 PM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-8

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 9:35:00 AM

Lab ID: 2201769-002

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/20/2022 12:00:51 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	1000	93		mg/Kg	10	1/20/2022 12:15:22 PM	65116
Motor Oil Range Organics (MRO)	ND	470		mg/Kg	10	1/20/2022 12:15:22 PM	65116
Surr: DNOP	0	51.1-141	S	%Rec	10	1/20/2022 12:15:22 PM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	6400	410		mg/Kg	100	1/20/2022 2:29:00 PM	R85281
Surr: BFB	241	70-130	S	%Rec	100	1/20/2022 2:29:00 PM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	14	0.10		mg/Kg	5	1/20/2022 9:54:00 AM	R85281
Toluene	180	4.1		mg/Kg	100	1/20/2022 2:29:00 PM	R85281
Ethylbenzene	47	4.1		mg/Kg	100	1/20/2022 2:29:00 PM	R85281
Xylenes, Total	390	8.2		mg/Kg	100	1/20/2022 2:29:00 PM	R85281
Surr: 4-Bromofluorobenzene	129	70-130		%Rec	100	1/20/2022 2:29:00 PM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-9

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 9:40:00 AM

Lab ID: 2201769-003

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/20/2022 12:13:15 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/20/2022 11:03:04 AM	65116
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/20/2022 11:03:04 AM	65116
Surr: DNOP	73.6	51.1-141		%Rec	1	1/20/2022 11:03:04 AM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/20/2022 3:09:00 PM	R85281
Surr: BFB	89.0	70-130		%Rec	1	1/20/2022 3:09:00 PM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.023		mg/Kg	1	1/20/2022 3:09:00 PM	R85281
Toluene	0.091	0.046		mg/Kg	1	1/20/2022 3:09:00 PM	R85281
Ethylbenzene	ND	0.046		mg/Kg	1	1/20/2022 3:09:00 PM	R85281
Xylenes, Total	0.20	0.092		mg/Kg	1	1/20/2022 3:09:00 PM	R85281
Surr: 4-Bromofluorobenzene	89.7	70-130		%Rec	1	1/20/2022 3:09:00 PM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-10

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 9:45:00 AM

Lab ID: 2201769-004

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/20/2022 12:25:40 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	260	9.3		mg/Kg	1	1/20/2022 11:15:16 AM	65116
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/20/2022 11:15:16 AM	65116
Surr: DNOP	78.2	51.1-141		%Rec	1	1/20/2022 11:15:16 AM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	63	19		mg/Kg	5	1/20/2022 10:34:00 AM	R85281
Surr: BFB	198	70-130	S	%Rec	5	1/20/2022 10:34:00 AM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.096		mg/Kg	5	1/20/2022 10:34:00 AM	R85281
Toluene	0.35	0.19		mg/Kg	5	1/20/2022 10:34:00 AM	R85281
Ethylbenzene	0.29	0.19		mg/Kg	5	1/20/2022 10:34:00 AM	R85281
Xylenes, Total	2.5	0.38		mg/Kg	5	1/20/2022 10:34:00 AM	R85281
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	5	1/20/2022 10:34:00 AM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-11

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 9:50:00 AM

Lab ID: 2201769-005

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/20/2022 12:38:05 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	79	9.0		mg/Kg	1	1/20/2022 11:27:22 AM	65116
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/20/2022 11:27:22 AM	65116
Surr: DNOP	78.3	51.1-141		%Rec	1	1/20/2022 11:27:22 AM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	110	23		mg/Kg	5	1/20/2022 10:53:00 AM	R85281
Surr: BFB	201	70-130	S	%Rec	5	1/20/2022 10:53:00 AM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.11		mg/Kg	5	1/20/2022 10:53:00 AM	R85281
Toluene	1.1	0.23		mg/Kg	5	1/20/2022 10:53:00 AM	R85281
Ethylbenzene	0.81	0.23		mg/Kg	5	1/20/2022 10:53:00 AM	R85281
Xylenes, Total	6.3	0.46		mg/Kg	5	1/20/2022 10:53:00 AM	R85281
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	5	1/20/2022 10:53:00 AM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-12

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 9:55:00 AM

Lab ID: 2201769-006

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	80	60		mg/Kg	20	1/20/2022 12:50:29 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	20	9.9		mg/Kg	1	1/20/2022 11:39:18 AM	65116
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/20/2022 11:39:18 AM	65116
Surr: DNOP	78.8	51.1-141		%Rec	1	1/20/2022 11:39:18 AM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND	17		mg/Kg	5	1/20/2022 11:13:00 AM	R85281
Surr: BFB	101	70-130		%Rec	5	1/20/2022 11:13:00 AM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.085		mg/Kg	5	1/20/2022 11:13:00 AM	R85281
Toluene	ND	0.17		mg/Kg	5	1/20/2022 11:13:00 AM	R85281
Ethylbenzene	ND	0.17		mg/Kg	5	1/20/2022 11:13:00 AM	R85281
Xylenes, Total	0.34	0.34		mg/Kg	5	1/20/2022 11:13:00 AM	R85281
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	5	1/20/2022 11:13:00 AM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-13

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 10:00:00 AM

Lab ID: 2201769-007

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	72	61		mg/Kg	20	1/20/2022 1:02:53 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	14	9.6		mg/Kg	1	1/20/2022 11:51:14 AM	65116
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/20/2022 11:51:14 AM	65116
Surr: DNOP	78.0	51.1-141		%Rec	1	1/20/2022 11:51:14 AM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	1/20/2022 11:32:00 AM	R85281
Surr: BFB	86.0	70-130		%Rec	1	1/20/2022 11:32:00 AM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.018		mg/Kg	1	1/20/2022 11:32:00 AM	R85281
Toluene	ND	0.037		mg/Kg	1	1/20/2022 11:32:00 AM	R85281
Ethylbenzene	ND	0.037		mg/Kg	1	1/20/2022 11:32:00 AM	R85281
Xylenes, Total	ND	0.074		mg/Kg	1	1/20/2022 11:32:00 AM	R85281
Surr: 4-Bromofluorobenzene	88.2	70-130		%Rec	1	1/20/2022 11:32:00 AM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-14

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 10:05:00 AM

Lab ID: 2201769-008

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	4100	150		mg/Kg	50	1/21/2022 8:35:04 AM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	44	9.9		mg/Kg	1	1/20/2022 12:03:13 PM	65116
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/20/2022 12:03:13 PM	65116
Surr: DNOP	77.1	51.1-141		%Rec	1	1/20/2022 12:03:13 PM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	1/20/2022 11:52:00 AM	R85281
Surr: BFB	104	70-130		%Rec	5	1/20/2022 11:52:00 AM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.10		mg/Kg	5	1/20/2022 11:52:00 AM	R85281
Toluene	0.22	0.21		mg/Kg	5	1/20/2022 11:52:00 AM	R85281
Ethylbenzene	ND	0.21		mg/Kg	5	1/20/2022 11:52:00 AM	R85281
Xylenes, Total	1.1	0.42		mg/Kg	5	1/20/2022 11:52:00 AM	R85281
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	5	1/20/2022 11:52:00 AM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-15

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 10:10:00 AM

Lab ID: 2201769-009

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/20/2022 1:52:30 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	19	9.8		mg/Kg	1	1/20/2022 11:38:51 AM	65116
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/20/2022 11:38:51 AM	65116
Surr: DNOP	99.8	51.1-141		%Rec	1	1/20/2022 11:38:51 AM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	1/20/2022 12:12:00 PM	R85281
Surr: BFB	90.2	70-130		%Rec	5	1/20/2022 12:12:00 PM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.11		mg/Kg	5	1/20/2022 12:12:00 PM	R85281
Toluene	ND	0.21		mg/Kg	5	1/20/2022 12:12:00 PM	R85281
Ethylbenzene	ND	0.21		mg/Kg	5	1/20/2022 12:12:00 PM	R85281
Xylenes, Total	ND	0.42		mg/Kg	5	1/20/2022 12:12:00 PM	R85281
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	5	1/20/2022 12:12:00 PM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-16

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 10:15:00 AM

Lab ID: 2201769-010

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/20/2022 2:04:55 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	55	9.9		mg/Kg	1	1/20/2022 12:02:36 PM	65116
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/20/2022 12:02:36 PM	65116
Surr: DNOP	105	51.1-141		%Rec	1	1/20/2022 12:02:36 PM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	72	19		mg/Kg	5	1/20/2022 12:31:00 PM	R85281
Surr: BFB	193	70-130	S	%Rec	5	1/20/2022 12:31:00 PM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.094		mg/Kg	5	1/20/2022 12:31:00 PM	R85281
Toluene	0.35	0.19		mg/Kg	5	1/20/2022 12:31:00 PM	R85281
Ethylbenzene	0.48	0.19		mg/Kg	5	1/20/2022 12:31:00 PM	R85281
Xylenes, Total	3.8	0.38		mg/Kg	5	1/20/2022 12:31:00 PM	R85281
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	5	1/20/2022 12:31:00 PM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-17

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 10:20:00 AM

Lab ID: 2201769-011

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	1/20/2022 2:17:20 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	26	10		mg/Kg	1	1/20/2022 12:27:20 PM	65116
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/20/2022 12:27:20 PM	65116
Surr: DNOP	80.0	51.1-141		%Rec	1	1/20/2022 12:27:20 PM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	25	18		mg/Kg	5	1/20/2022 1:11:00 PM	R85281
Surr: BFB	130	70-130	S	%Rec	5	1/20/2022 1:11:00 PM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.089		mg/Kg	5	1/20/2022 1:11:00 PM	R85281
Toluene	0.32	0.18		mg/Kg	5	1/20/2022 1:11:00 PM	R85281
Ethylbenzene	ND	0.18		mg/Kg	5	1/20/2022 1:11:00 PM	R85281
Xylenes, Total	1.4	0.35		mg/Kg	5	1/20/2022 1:11:00 PM	R85281
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	5	1/20/2022 1:11:00 PM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2201769

Date Reported: 1/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-18

Project: Jicarilla GasCom B1 CH

Collection Date: 1/19/2022 10:25:00 AM

Lab ID: 2201769-012

Matrix: MEOH (SOIL)

Received Date: 1/20/2022 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	61		mg/Kg	20	1/20/2022 2:29:45 PM	65120
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	10	9.2		mg/Kg	1	1/20/2022 12:39:17 PM	65116
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/20/2022 12:39:17 PM	65116
Surr: DNOP	80.3	51.1-141		%Rec	1	1/20/2022 12:39:17 PM	65116
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	1/20/2022 1:30:00 PM	R85281
Surr: BFB	95.5	70-130		%Rec	5	1/20/2022 1:30:00 PM	R85281
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND	0.093		mg/Kg	5	1/20/2022 1:30:00 PM	R85281
Toluene	ND	0.19		mg/Kg	5	1/20/2022 1:30:00 PM	R85281
Ethylbenzene	ND	0.19		mg/Kg	5	1/20/2022 1:30:00 PM	R85281
Xylenes, Total	ND	0.37		mg/Kg	5	1/20/2022 1:30:00 PM	R85281
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	5	1/20/2022 1:30:00 PM	R85281

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 12 of 16

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2201769

26-Jan-22

Client: ENSOLUM**Project:** Jicarilla GasCom B1 CH

Sample ID: MB-65120	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 65120	RunNo: 85296								
Prep Date: 1/20/2022	Analysis Date: 1/20/2022	SeqNo: 3001297	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-65120	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 65120	RunNo: 85296								
Prep Date: 1/20/2022	Analysis Date: 1/20/2022	SeqNo: 3001298	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.6	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative 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#: 2201769

26-Jan-22

Client: ENSOLUM**Project:** Jicarilla GasCom B1 CH

Sample ID: MB-65116	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 65116	RunNo: 85287								
Prep Date: 1/20/2022	Analysis Date: 1/20/2022	SeqNo: 3000501	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		81.6	51.1	141			

Sample ID: LCS-65116	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 65116	RunNo: 85287								
Prep Date: 1/20/2022	Analysis Date: 1/20/2022	SeqNo: 3000502	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.3	68.9	135			
Surr: DNOP	4.0		5.000		80.7	51.1	141			

Sample ID: 2201769-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: S-7	Batch ID: 65116	RunNo: 85287								
Prep Date: 1/20/2022	Analysis Date: 1/20/2022	SeqNo: 3000635	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	930	9.9	49.65	944.3	-29.2	39.3	155			S
Surr: DNOP	3.3		4.965		66.9	51.1	141			

Sample ID: 2201769-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: S-7	Batch ID: 65116	RunNo: 85287								
Prep Date: 1/20/2022	Analysis Date: 1/20/2022	SeqNo: 3000636	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	890	9.8	48.88	944.3	-118	39.3	155	4.76	23.4	S
Surr: DNOP	3.1		4.888		63.5	51.1	141	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 Quantitative 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#: 2201769

26-Jan-22

Client: ENSOLUM**Project:** Jicarilla GasCom B1 CH

Sample ID: mb-water	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: R85281		RunNo: 85281							
Prep Date:	Analysis Date: 1/20/2022		SeqNo: 3000341		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	920		1000		91.7	70	130			

Sample ID: 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: R85281		RunNo: 85281							
Prep Date:	Analysis Date: 1/20/2022		SeqNo: 3000342		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	94.8	78.6	131			
Surr: BFB	1100		1000		112	70	130			

Sample ID: 2201769-003ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: S-9	Batch ID: R85281		RunNo: 85281							
Prep Date:	Analysis Date: 1/20/2022		SeqNo: 3001112		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.6	23.10	0	89.1	70	130			
Surr: BFB	860		924.2		92.6	70	130			

Sample ID: 2201769-003amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: S-9	Batch ID: R85281		RunNo: 85281							
Prep Date:	Analysis Date: 1/20/2022		SeqNo: 3001114		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.6	23.10	0	89.2	70	130	0.179	20	
Surr: BFB	870		924.2		93.8	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 Quantitative 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#: 2201769

26-Jan-22

Client: ENSOLUM**Project:** Jicarilla GasCom B1 CH

Sample ID: mb-water	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: R85281	RunNo: 85281								
Prep Date:	Analysis Date: 1/20/2022	SeqNo: 3000346	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	0.98		1.000		97.8	70	130			

Sample ID: 100ng btex lcs	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: R85281	RunNo: 85281								
Prep Date:	Analysis Date: 1/20/2022	SeqNo: 3000347	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	100	80	120			
Toluene	0.99	0.050	1.000	0	99.2	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.4	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	70	130			

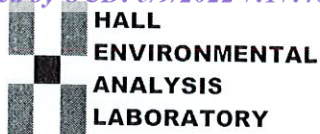
Sample ID: 2201769-007ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-13	Batch ID: R85281	RunNo: 85281								
Prep Date:	Analysis Date: 1/20/2022	SeqNo: 3001136	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.018	0.7396	0	100	80	120			
Toluene	0.77	0.037	0.7396	0	104	80	120			
Ethylbenzene	0.73	0.037	0.7396	0	98.4	80	120			
Xylenes, Total	2.2	0.074	2.219	0.02649	99.9	80	120			
Surr: 4-Bromofluorobenzene	0.64		0.7396		86.8	70	130			

Sample ID: 2201769-007amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-13	Batch ID: R85281	RunNo: 85281								
Prep Date:	Analysis Date: 1/20/2022	SeqNo: 3001138	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.71	0.018	0.7396	0	95.7	80	120	4.48	20	
Toluene	0.74	0.037	0.7396	0	100	80	120	3.39	20	
Ethylbenzene	0.70	0.037	0.7396	0	94.5	80	120	3.99	20	
Xylenes, Total	2.2	0.074	2.219	0.02649	96.3	80	120	3.57	20	
Surr: 4-Bromofluorobenzene	0.61		0.7396		82.4	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 Quantitative 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
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: ENSOLUM

Work Order Number: 2201769

RcptNo: 1

Received By: Tracy Casarrubias 1/20/2022 7:00:00 AM

Completed By: Sean Livingston 1/20/2022 8:05:44 AM

Reviewed By: *KRC* *HT* *1/20/22**San Lopez*Chain of Custody*KRC* *1/20/22*1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐2. How was the sample delivered? CourierLog In3. 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? Yes ☒ No ☐

(Note discrepancies on chain of custody)

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? Yes ☒ No ☐

(If no, notify customer for authorization.)

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *jr 1/20/22*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	0.4	Good				

Chain-of-Custody Record

Client: Ensolium, LLCMailing Address: 666 S Bio GrandeSuite A 87410

Phone #:

email or Fax#: cdaposti@ensolium.com

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC☐ Other☐ EDD (Type)

Project Manager:

K. SummersSampler: CDAPostiOn Ice: ☒ Yes ☐ No# of Coolers: 1Cooler Temp (including CF): 0.4-0.4 (°C)

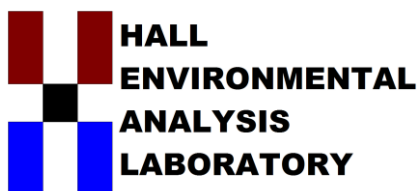
Container Type and #

Preservative Type

HEAL No.

(°C)

22017609001002003004005006007008009010011012013014015016017018019020021022023024025026027028029030031032033034035036037038039040041042043044045046047048049050051052053054055056057058059060061062063064065066067068069070071072073074075076077078079080081082083084085086087088089090091092093094095096097098099100101102103104105106107108109110111112113114115116117118119120121122123124125126127128129130131132133134135136137138139140141142143144145146147148149150151152153154155156157158159160161162163164165166167168169170171172173174175176177178179180181182183184185186187188189190191192193194195196197198199200201202203204205206207208209210211212213214215216217218219220221222223224225226227228229230231232233234235236237238239240241242243244245246247248249250251252253254255256257258259260261262263264265266267268269270271272273274275276277278279280281282283284285286287288289290291292293294295296297298299300301302303304305306307



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

January 28, 2022

Kyle Summers

ENSOLUM

606 S. Rio Grande Suite A

Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Jicarilla Gas Com B1 CH

OrderNo.: 2201931

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 9 sample(s) on 1/25/2022 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2201931

Date Reported: 1/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-19

Project: Jicarilla Gas Com B1 CH

Collection Date: 1/24/2022 9:30:00 AM

Lab ID: 2201931-001

Matrix: MEOH (SOIL)

Received Date: 1/25/2022 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	1/25/2022 10:28:10 AM	65186
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	310	9.5		mg/Kg	1	1/25/2022 10:56:06 AM	65184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/25/2022 10:56:06 AM	65184
Surr: DNOP	96.6	51.1-141		%Rec	1	1/25/2022 10:56:06 AM	65184
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	550	19		mg/Kg	5	1/25/2022 9:39:49 AM	G85392
Surr: BFB	551	70-130	S	%Rec	5	1/25/2022 9:39:49 AM	G85392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.39	0.094		mg/Kg	5	1/25/2022 9:39:49 AM	B85392
Toluene	14	0.19		mg/Kg	5	1/25/2022 9:39:49 AM	B85392
Ethylbenzene	3.7	0.19		mg/Kg	5	1/25/2022 9:39:49 AM	B85392
Xylenes, Total	42	0.38		mg/Kg	5	1/25/2022 9:39:49 AM	B85392
Surr: 4-Bromofluorobenzene	127	70-130		%Rec	5	1/25/2022 9:39:49 AM	B85392

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201931

Date Reported: 1/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-20

Project: Jicarilla Gas Com B1 CH

Collection Date: 1/24/2022 9:35:00 AM

Lab ID: 2201931-002

Matrix: MEOH (SOIL)

Received Date: 1/25/2022 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	71	60		mg/Kg	20	1/25/2022 10:40:34 AM	65186
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	260	9.7		mg/Kg	1	1/25/2022 11:19:52 AM	65184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/25/2022 11:19:52 AM	65184
Surr: DNOP	96.4	51.1-141		%Rec	1	1/25/2022 11:19:52 AM	65184
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	60	20		mg/Kg	5	1/25/2022 10:03:11 AM	G85392
Surr: BFB	187	70-130	S	%Rec	5	1/25/2022 10:03:11 AM	G85392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.099		mg/Kg	5	1/25/2022 10:03:11 AM	B85392
Toluene	0.53	0.20		mg/Kg	5	1/25/2022 10:03:11 AM	B85392
Ethylbenzene	ND	0.20		mg/Kg	5	1/25/2022 10:03:11 AM	B85392
Xylenes, Total	2.2	0.40		mg/Kg	5	1/25/2022 10:03:11 AM	B85392
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	5	1/25/2022 10:03:11 AM	B85392

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201931

Date Reported: 1/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-21

Project: Jicarilla Gas Com B1 CH

Collection Date: 1/24/2022 9:40:00 AM

Lab ID: 2201931-003

Matrix: MEOH (SOIL)

Received Date: 1/25/2022 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	200	60		mg/Kg	20	1/25/2022 10:52:59 AM	65186
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	1/25/2022 11:43:42 AM	65184
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/25/2022 11:43:42 AM	65184
Surr: DNOP	96.6	51.1-141		%Rec	1	1/25/2022 11:43:42 AM	65184
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	1/25/2022 10:26:40 AM	G85392
Surr: BFB	102	70-130		%Rec	5	1/25/2022 10:26:40 AM	G85392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.10		mg/Kg	5	1/25/2022 10:26:40 AM	B85392
Toluene	ND	0.20		mg/Kg	5	1/25/2022 10:26:40 AM	B85392
Ethylbenzene	ND	0.20		mg/Kg	5	1/25/2022 10:26:40 AM	B85392
Xylenes, Total	ND	0.40		mg/Kg	5	1/25/2022 10:26:40 AM	B85392
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	5	1/25/2022 10:26:40 AM	B85392

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201931

Date Reported: 1/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: S-22

Project: Jicarilla Gas Com B1 CH

Collection Date: 1/24/2022 9:45:00 AM

Lab ID: 2201931-004

Matrix: MEOH (SOIL)

Received Date: 1/25/2022 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	69	60		mg/Kg	20	1/25/2022 11:05:23 AM	65186
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	28	9.7		mg/Kg	1	1/25/2022 12:07:28 PM	65184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/25/2022 12:07:28 PM	65184
Surr: DNOP	95.5	51.1-141		%Rec	1	1/25/2022 12:07:28 PM	65184
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	23		mg/Kg	5	1/25/2022 10:50:07 AM	G85392
Surr: BFB	108	70-130		%Rec	5	1/25/2022 10:50:07 AM	G85392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.11		mg/Kg	5	1/25/2022 10:50:07 AM	B85392
Toluene	ND	0.23		mg/Kg	5	1/25/2022 10:50:07 AM	B85392
Ethylbenzene	ND	0.23		mg/Kg	5	1/25/2022 10:50:07 AM	B85392
Xylenes, Total	1.1	0.45		mg/Kg	5	1/25/2022 10:50:07 AM	B85392
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	5	1/25/2022 10:50:07 AM	B85392

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201931

Date Reported: 1/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: FP-1

Project: Jicarilla Gas Com B1 CH

Collection Date: 1/24/2022 9:50:00 AM

Lab ID: 2201931-005

Matrix: MEOH (SOIL)

Received Date: 1/25/2022 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	75	60		mg/Kg	20	1/25/2022 11:17:47 AM	65186
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	700	10		mg/Kg	1	1/25/2022 11:28:22 AM	65184
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/25/2022 11:28:22 AM	65184
Surr: DNOP	91.6	51.1-141		%Rec	1	1/25/2022 11:28:22 AM	65184
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	2200	220		mg/Kg	50	1/25/2022 1:11:31 PM	G85392
Surr: BFB	314	70-130	S	%Rec	50	1/25/2022 1:11:31 PM	G85392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.33	0.11		mg/Kg	5	1/25/2022 11:13:39 AM	B85392
Toluene	22	0.22		mg/Kg	5	1/25/2022 11:13:39 AM	B85392
Ethylbenzene	5.2	0.22		mg/Kg	5	1/25/2022 11:13:39 AM	B85392
Xylenes, Total	140	4.5		mg/Kg	50	1/25/2022 1:11:31 PM	B85392
Surr: 4-Bromofluorobenzene	193	70-130	S	%Rec	5	1/25/2022 11:13:39 AM	B85392

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201931

Date Reported: 1/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: FP-2

Project: Jicarilla Gas Com B1 CH

Collection Date: 1/24/2022 9:55:00 AM

Lab ID: 2201931-006

Matrix: MEOH (SOIL)

Received Date: 1/25/2022 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	340	60		mg/Kg	20	1/25/2022 11:30:11 AM	65186
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	1500	98		mg/Kg	10	1/26/2022 3:50:51 PM	65184
Motor Oil Range Organics (MRO)	ND	490	D	mg/Kg	10	1/26/2022 3:50:51 PM	65184
Surr: DNOP	0	51.1-141	S	%Rec	10	1/26/2022 3:50:51 PM	65184
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	190	20		mg/Kg	5	1/25/2022 1:58:54 PM	G85392
Surr: BFB	406	70-130	S	%Rec	5	1/25/2022 1:58:54 PM	G85392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.099		mg/Kg	5	1/25/2022 1:58:54 PM	B85392
Toluene	ND	0.20		mg/Kg	5	1/25/2022 1:58:54 PM	B85392
Ethylbenzene	ND	0.20		mg/Kg	5	1/25/2022 1:58:54 PM	B85392
Xylenes, Total	5.4	0.40		mg/Kg	5	1/25/2022 1:58:54 PM	B85392
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	5	1/25/2022 1:58:54 PM	B85392

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201931

Date Reported: 1/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: FP-3

Project: Jicarilla Gas Com B1 CH

Collection Date: 1/24/2022 10:00:00 AM

Lab ID: 2201931-007

Matrix: MEOH (SOIL)

Received Date: 1/25/2022 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	1/25/2022 11:42:35 AM	65186
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	920	9.5		mg/Kg	1	1/25/2022 12:16:36 PM	65184
Motor Oil Range Organics (MRO)	60	48		mg/Kg	1	1/25/2022 12:16:36 PM	65184
Surr: DNOP	103	51.1-141		%Rec	1	1/25/2022 12:16:36 PM	65184
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	380	24		mg/Kg	5	1/25/2022 12:00:43 PM	G85392
Surr: BFB	496	70-130	S	%Rec	5	1/25/2022 12:00:43 PM	G85392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	1/25/2022 12:00:43 PM	B85392
Toluene	2.3	0.24		mg/Kg	5	1/25/2022 12:00:43 PM	B85392
Ethylbenzene	1.5	0.24		mg/Kg	5	1/25/2022 12:00:43 PM	B85392
Xylenes, Total	22	0.48		mg/Kg	5	1/25/2022 12:00:43 PM	B85392
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	5	1/25/2022 12:00:43 PM	B85392

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201931

Date Reported: 1/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: FP-4

Project: Jicarilla Gas Com B1 CH

Collection Date: 1/24/2022 10:05:00 AM

Lab ID: 2201931-008

Matrix: MEOH (SOIL)

Received Date: 1/25/2022 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	1/25/2022 11:55:00 AM	65186
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	10	10		mg/Kg	1	1/25/2022 12:40:42 PM	65184
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/25/2022 12:40:42 PM	65184
Surr: DNOP	91.6	51.1-141		%Rec	1	1/25/2022 12:40:42 PM	65184
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	1/25/2022 12:24:21 PM	G85392
Surr: BFB	118	70-130		%Rec	1	1/25/2022 12:24:21 PM	G85392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	1/25/2022 12:24:21 PM	B85392
Toluene	ND	0.042		mg/Kg	1	1/25/2022 12:24:21 PM	B85392
Ethylbenzene	ND	0.042		mg/Kg	1	1/25/2022 12:24:21 PM	B85392
Xylenes, Total	0.17	0.084		mg/Kg	1	1/25/2022 12:24:21 PM	B85392
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	1/25/2022 12:24:21 PM	B85392

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2201931

Date Reported: 1/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: FP-5

Project: Jicarilla Gas Com B1 CH

Collection Date: 1/24/2022 10:10:00 AM

Lab ID: 2201931-009

Matrix: MEOH (SOIL)

Received Date: 1/25/2022 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	1/25/2022 12:32:12 PM	65186
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/25/2022 12:55:17 PM	65184
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/25/2022 12:55:17 PM	65184
Surr: DNOP	97.1	51.1-141		%Rec	1	1/25/2022 12:55:17 PM	65184
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	1/25/2022 12:48:06 PM	G85392
Surr: BFB	102	70-130		%Rec	1	1/25/2022 12:48:06 PM	G85392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	1/25/2022 12:48:06 PM	B85392
Toluene	ND	0.042		mg/Kg	1	1/25/2022 12:48:06 PM	B85392
Ethylbenzene	ND	0.042		mg/Kg	1	1/25/2022 12:48:06 PM	B85392
Xylenes, Total	ND	0.084		mg/Kg	1	1/25/2022 12:48:06 PM	B85392
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	1/25/2022 12:48:06 PM	B85392

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2201931

28-Jan-22

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 CH

Sample ID: MB-65186	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 65186	RunNo: 85410								
Prep Date: 1/25/2022	Analysis Date: 1/25/2022	SeqNo: 3005331	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-65186	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 65186	RunNo: 85410								
Prep Date: 1/25/2022	Analysis Date: 1/25/2022	SeqNo: 3005332	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.7	90	110			

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 Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2201931

28-Jan-22

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 CH

Sample ID: MB-65184	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 65184	RunNo: 85383								
Prep Date: 1/25/2022	Analysis Date: 1/25/2022	SeqNo: 3004697	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.8		10.00		98.3	51.1	141			

Sample ID: LCS-65184	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 65184	RunNo: 85383								
Prep Date: 1/25/2022	Analysis Date: 1/25/2022	SeqNo: 3004698	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.4	68.9	135			
Surr: DNOP	4.5		5.000		90.5	51.1	141			

Sample ID: 2201931-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: S-19	Batch ID: 65184	RunNo: 85383								
Prep Date: 1/25/2022	Analysis Date: 1/25/2022	SeqNo: 3004700	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	320	9.4	46.99	314.9	13.6	39.3	155			S
Surr: DNOP	4.2		4.699		89.6	51.1	141			

Sample ID: 2201931-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: S-19	Batch ID: 65184	RunNo: 85383								
Prep Date: 1/25/2022	Analysis Date: 1/25/2022	SeqNo: 3005224	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	330	10	50.40	314.9	38.7	39.3	155	4.00	23.4	S
Surr: DNOP	4.9		5.040		97.6	51.1	141	0	0	

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 Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2201931

28-Jan-22

Client: ENSOLUM
Project: Jicarilla Gas Com B1 CH

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: G85392		RunNo: 85392							
Prep Date:	Analysis Date: 1/25/2022		SeqNo: 3005082		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		100	70	130			

Sample ID: 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: G85392		RunNo: 85392							
Prep Date:	Analysis Date: 1/25/2022		SeqNo: 3005083		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.9	78.6	131			
Surr: BFB	1100		1000		111	70	130			

Sample ID: 2201931-001ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: S-19	Batch ID: G85392		RunNo: 85392							
Prep Date:	Analysis Date: 1/25/2022		SeqNo: 3005084		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	680	19	94.27	548.8	142	70	130			S
Surr: BFB	23000		3771		602	70	130			S

Sample ID: 2201931-001amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: S-19	Batch ID: G85392		RunNo: 85392							
Prep Date:	Analysis Date: 1/25/2022		SeqNo: 3005085		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	670	19	94.27	548.8	132	70	130	1.40	20	S
Surr: BFB	22000		3771		586	70	130	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 Quantitative 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#: 2201931

28-Jan-22

Client: ENSOLUM**Project:** Jicarilla Gas Com B1 CH

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: B85392	RunNo: 85392								
Prep Date:	Analysis Date: 1/25/2022	SeqNo: 3005118	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	70	130			

Sample ID: 100ng btex lcs	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: B85392	RunNo: 85392								
Prep Date:	Analysis Date: 1/25/2022	SeqNo: 3005119	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.0	80	120			
Toluene	0.99	0.050	1.000	0	98.8	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.2	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	70	130			

Sample ID: 2201931-002ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-20	Batch ID: B85392	RunNo: 85392								
Prep Date:	Analysis Date: 1/25/2022	SeqNo: 3005120	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.8	0.099	3.975	0.06359	94.1	80	120			
Toluene	4.5	0.20	3.975	0.5286	99.0	80	120			
Ethylbenzene	4.0	0.20	3.975	0.1928	97.0	80	120			
Xylenes, Total	14	0.40	11.92	2.197	99.8	80	120			
Surr: 4-Bromofluorobenzene	4.2		3.975		105	70	130			

Sample ID: 2201931-002amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-20	Batch ID: B85392	RunNo: 85392								
Prep Date:	Analysis Date: 1/25/2022	SeqNo: 3005121	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.7	0.099	3.975	0.06359	92.6	80	120	1.63	20	
Toluene	4.4	0.20	3.975	0.5286	96.8	80	120	2.01	20	
Ethylbenzene	4.0	0.20	3.975	0.1928	96.0	80	120	0.977	20	
Xylenes, Total	14	0.40	11.92	2.197	99.0	80	120	0.710	20	
Surr: 4-Bromofluorobenzene	4.2		3.975		107	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 Quantitative 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
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: ENSOLUM

Work Order Number: 2201931

RcptNo: 1

Received By: Sean Livingston

1/25/2022 7:50:00 AM

Completed By: Tracy Casarrubias

1/25/2022 8:08:47 AM

Reviewed By:

KPG 1/25/22

S. Livingston

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: JN 1/25/22

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	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

Remarks: pm Tom Long
Pay Key RB 21200

Send

Turn-Around Time: 10:30 Saturday

☐ Standard ☒ Rush 1-25-22

Project Name: _____

Project #: Trinidad Gas Com BL EH

Project Manager:	B. Summers
Sampler:	C. D. Agosti
On Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
# of Coolers:	1
Cooler Temp (including CF):	1.0 - 0.2 = 0.8 (°C)

Container Type and #	Preservative Type	HEAL No. 2201931
1402 500	Pool	001
	Pool	002
	Pool	003
	Pool	004
	Pool	005
	Pool	006
	Pool	007
	Pool	008
	Pool	009

received by:	Via:	Date	Time
<i>AMWA</i>		11/24/22	1315
received by:	Via:	Date	Time
<i>52c</i>	<i>conv</i>	1/25/22	7:50

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

Action 105131

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 105131
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/20/2022