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)*: **NAPP2103923727**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.70821** Longitude **-108.05361** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Crawford GC B#1E**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: : **2/1/2021**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
N	**24**	**29N**	**12W**	**San Juan**

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name*: **Max D. Kennemer**)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **5-10 Barrels**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **37.57 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On February 1, 2021, Enterprise had a release of natural gas and natural gas liquids from the Crawford GC B#1E pipeline riser. No liquids were observed on the ground surface. No washes/waterways were affected. The pipeline was isolated, depressurized, locked and tagged out. Enterprise determined this release reportable on February 3, 2021, due the volume of impacted subsurface soil and the presence for groundwater in the excavation. The final excavation dimensions measured approximately 80 feet long by 8 feet wide by 9 feet deep. Approximately 180 cubic yards of hydrocarbon impacted soil was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm. During February 2021, a groundwater investigation and groundwater remediation activities were completed. No ongoing impacts to groundwater exist. 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: Jon E. Fields Title: Director, Environmental

Signature: Jon E. Fields Date: 9/1/2021

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

OCD Only

Received by: Date:

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

Closure Approved by: Nelson Velez Date: 03/03/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

CLOSURE REPORT

Property:

Crawford GC B#1E (02/01/21)
SW ¼, S24 T29N R12W
San Juan County, New Mexico

NM EMNRD OCD Incident ID No. NAPP2103923727

April 8, 2021
Ensolum Project No. 05A1226137

Prepared for:

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

Prepared by:

Ranee Deechilly
Environmental Scientist

Kyle Summers
Senior Project Manager

Table of Contents

LIST OF APPENDICES

ENSOLUM

CLOSURE REPORT

Crawford GC B#1E (02/01/21)
SW ¼, S24 T29N R12W
San Juan County, New Mexico

Ensolum Project No. 05A1226137

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Crawford GC B#1E (02/01/21) (Site)
Incident ID	NAPP2103923727
Location:	36.7082° North, 108.0536° West Southwest (SW) ¼ of Section 24, Township 29 North, Range 12 West San Juan County, New Mexico
Property:	Private Property
Regulatory:	New Mexico (NM) Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On February 1, 2021, a release of natural gas was identified on the Crawford GC B#1E pipeline. Enterprise subsequently isolated and locked the pipeline out of service. On February 3, 2021, Enterprise initiated activities to facilitate the repair of the pipeline and remediate potential petroleum hydrocarbon impact.

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 potential constituent of concern (COC) concentrations in the on-Site soils and groundwater to below the applicable NM EMNRD OCD closure criteria and Water Quality Control Commission (WQCC) Groundwater Quality Standards (GQSs).

2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the NM EMNRD OCD. To address activities related to oil and gas releases, the NM EMNRD OCD references New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action. Ensolum, LLC (Ensolum) utilized information provided by Enterprise, the general site characteristics, and information available from the NM Office of the State Engineer (OSE) and the NM EMNRD OCD imaging database to determine the appropriate closure criteria for the Site. Additionally, Ensolum utilized the NM WQCC GQSs (NMAC 20.6.2 *Groundwater and Surface Water Protection*) to evaluate groundwater conditions. Supporting figures and documentation associated with the following bullets are provided in **Appendix B**.

- The OSE tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other

points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). Numerous PODS were identified in the same Public Land Survey System (PLSS) section as the Site as well as in adjacent sections. The average depth to water for the PODs located in this PLSS section and in adjacent PLSS sections is approximately 21 feet below grade surface (bgs). The records for the closest PODs (SJ-03786 and SJ-03735), located approximately 400 feet and 350 feet, respectively, southwest of the Site, indicate depths to water of 11 feet and 15 feet bgs, respectively. The depth to water encountered during remediation activities was approximately seven (7) feet bgs (**Figure A**, **Appendix B**).

- Two (2) cathodic wells were identified in PLSS sections adjacent to the Site in the NM EMNRD OCD imaging database. The records for the cathodic protection well located near the H.J.Loe "B" Fed #2R (Sec 23, T29N, R12W) well location indicate a depth to water of approximately 235 feet bgs. This cathodic protection well is located approximately 0.9 miles northwest of the Site. The records for the cathodic protection well located near the G.C.U #145-E (Sec 26, T29N, R12W) well location indicate a depth to water of approximately 60 feet bgs. This cathodic protection well is located approximately 1.2 miles southwest of the Site. (**Figure B**, **Appendix B**).

- The Site is located within 300 feet of a New Mexico EMNRD OCD-defined significant watercourse. The Site is adjacent to an ephemeral wash (**Figure C**, **Appendix B**).

- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake.

- The Site is located within 300 feet of a permanent residence, school, hospital, institution, or church. The nearest permanent residence is located approximately 120 feet south of the Site (**Figure D**, **Appendix B**).

- Based on information provided by the OSE WRRS there are private domestic fresh water wells used by less than five (5) households for domestic and/or stock watering purposes within 500 feet of the Site. The nearest wells are indicated by the OSE WRRS database at approximately 350 feet and 400 feet southwest of the Site (**Figure E**, **Appendix B**).

- Based on information provided by the OSE WRRS there are fresh water wells identified within 1,000 feet of the Site. Some residences located within the 1,000 feet may also have unregistered water wells (**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 United States (US) Fish & Wildlife Service National Wetlands Inventory Wetlands Mapper, the Site is located within 300 feet of a wetland. The Site is located approximately 95 feet west of a freshwater forested/shrub area; 240 feet northwest of a freshwater emergent wetland; and 270 feet northwest of a forested/shrub riparian zone (**Figure F**, **Appendix B**).

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

- The Site is not located within an unstable area.

- Based on information identified in the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is located within a 100-year floodplain (**Figure H**, **Appendix B**).

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

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

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

3.0 REMEDIATION ACTIVITIES

On February 3, 2021, Enterprise initiated activities to facilitate the repair of the pipeline and remediate potential petroleum hydrocarbon impact resulting from the Crawford GC B#1E pipeline release. During the remediation and corrective action activities, Sierra Oilfield Services Inc., (Sierra) provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

During remediation activities, water was encountered at approximately seven (7) feet bgs. The water in the excavation was pumped utilizing a spec-truck to remove water that contacted the affected soil during remediation activities and was subsequently disposed of at the Industrial Ecosystems, Inc., (IEI) landfarm on Crouch Mesa near Aztec, NM.

The final excavation measured approximately 80 feet long and eight (8) feet wide at the maximum extents. The maximum depth of the excavation measured approximately nine (9) feet bgs.

The lithology encountered during the completion of remediation activities ranged from unconsolidated silty sand to medium-grained unconsolidated sand and cobbles.

Upon completion of pipeline repair and soil remediation activities, Enterprise corresponded with the NM EMNRD OCD and determined that temporary sampling points would be installed at the Site to evaluate groundwater. On February 19, 2021, two (2) temporary sampling points were installed at the Site during the backfill activities to provide access to groundwater for sampling. Regulatory correspondence is provided in **Appendix C**.

The two (2) temporary sample points (TW-1 and TW-2) were completed using the following methodology:

- Installation of five (5) feet of 2-inch diameter, 0.010 machine slotted polyvinyl chloride (PVC) well screen with a threaded bottom plug;
- Installation of PVC riser pipe to above the ground surface;
- Installation of a locking well cap.

The sample points were developed by removing groundwater until the fluid appeared relatively free of fine-grained sediment.

Approximately 180 cubic yards of petroleum hydrocarbon affected soils and 10 barrels (bbls) of water were transported to the IEI landfarm for disposal/remediation. The executed C-138 solid waste acceptance form is provided in **Appendix D**. The excavation was backfilled with imported fill and laboratory-confirmed stockpiled soils.

Figure 3 (**Appendix A**) identifies the approximate soil sample locations and depicts the approximate dimensions of the excavation with respect to the pipeline. **Figure 4** (**Appendix A**) identifies the approximate water sample locations with respect to the excavation. Photographic documentation of the field activities is included in **Appendix E**.

4.0 SOIL AND WATER SAMPLING PROGRAM

Ensolum field screened the soil samples from the excavation utilizing a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system and a photoionization detector (PID) fitted with a 10.6 eV lamp to guide excavation extents.

Ensolum's soil sampling program included the collection of eight (8) composite soil samples (S-1 through S-8) from the excavation for laboratory analysis. In addition, six (6) composite soil samples (SP-1 through SP-6) were collected from the stockpiled soils that were segregated for potential reuse, to confirm the material was suitable to remain on Site and to confirm the western extent of impact was delineated. The composite samples were comprised of five (5) aliquots each, representing an estimated 200 square foot sample area per guidelines outlined in Section D of 19.15.29.12 NMAC. A clean shovel was utilized to obtain fresh aliquots from each accessible area of the excavation.

First Sampling Event
On February 3, 2021, the first sampling event was performed at the Site. Soil samples were collected in the immediate vicinity of the release point, and one sample (SP-1) was collected from stockpiled soil adjacent to the release point.

Composite soil samples S-1 (7') and S-4 (7') were collected from the floor of the excavation. Composite soil samples S-2 (0'-7'), S-3 (0'-7'), and S-5 (0'-7') were collected from the sidewalls of the excavation.

Subsequent soil analytical results identified COC concentrations that exceeded the NM EMNRD OCD closure criteria for composite soil samples S-1 and S-2. In response to the data exceedances, the excavation was extended. During the enlargement of the excavation, groundwater was encountered. Enterprise upgraded the Site to a "reportable" release and the NM EMNRD OCD was formally notified. The soils associated with composite soil samples S-1, S-2, and SP-1 were removed from the Site and transported to the landfarm for disposal/remediation.

Second Sampling Event
On February 8, 2021, the second sampling event was performed at the Site. The NM EMNRD OCD was notified of the sampling event although no representative was present during sampling activities.

Composite soil samples S-6 (0'-7'), S-7 (0'-7'), and S-8 (0'-7') were collected from the excavation walls. In addition, composite soil samples (SP-2 through SP-6) were collected from stockpiled soils on the west section of the excavation to demonstrate that the soils did not exhibit BTEX impact and that they were suitable for reuse as backfill.

The floor in the vicinity of the release point and in the eastern end of the excavation was further excavated following the collection of samples S-6 through S-8. Subsequent to the excavation enlargement, water was removed from the excavation utilizing a spec-truck and was subsequently transported to the IEI landfarm for disposal.

Third Sampling Event
On February 12, 2021, a water sample (GW-1) was collected from the open excavation utilizing a disposable bailer and was subsequently submitted for laboratory analysis to evaluate the potential for groundwater impact at the Site.

Following sample collection, additional water was removed from excavation and transported to the IEI landfarm for disposal.

The NM EMNRD OCD was notified of the sampling event although no representative was present during sampling activities. The water analytical results for GW-1 did not identify COC concentrations above applicable WQCC standards.

Fourth Sampling Event
On February 19, 2021, Enterprise installed and developed two (2) temporary sampling points at the Site during backfill activities.

Fifth Sampling Event
On February 22, 2021, the temporary sampling points were purged of three casing volumes of water utilizing disposable bailers, and water samples were collected and submitted for laboratory analysis.

All samples were collected and placed in laboratory prepared containers. 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 LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for BTEX using Environmental Protection Agency (EPA) SW-846 Method 8021/8260; TPH GRO/DRO/MRO using EPA SW-846 Method 8015; and chlorides using EPA Method 300.0.

The initial water sample collected from the open excavation was analyzed for BTEX using EPA SW-846 Method 8260. The water samples collected from the temporary sampling points were analyzed for VOCs using EPA SW-846 Method 8260; total dissolved solids (TDS) using Standard Method (SM) 2540C MOD; pH using SM4500H+B/9040C; cations using EPA Method 200.7; and anions using EPA Method 300.

The laboratory analytical results are summarized in **Table 1** through **Table 3** in **Appendix F**. **Table 2** only identifies the constituents that indicated a reported concentration above the laboratory practical quantitation limits (PQLs) or reporting limits (RLs). The laboratory data sheets and executed chain-of-custody forms are provided in **Appendix G**.

6.0 DATA EVALUATION

6.1 Soil Data Evaluation

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (S-3 through S-8 and SP-2 through SP-6) to the applicable NM EMNRD OCD closure criteria. The soils associated with composite soil samples S-1, S-2, and SP-1 were transported to IEI landfarm for disposal/remediation and are not included in the following discussion.

- The laboratory analytical result for composite soil sample S-5 indicates a benzene concentration of 0.020 mg/kg, which is less than the applicable 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 that benzene is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD closure criteria of 10 mg/kg.

- The laboratory analytical results for composite soil samples S-3, S-5, and SP-2 indicate total BTEX concentrations ranging from 0.13 mg/kg (S-3) to 0.23 mg/kg (SP-2), which are less than the applicable NM EMNRD OCD closure criteria of 50 mg/kg. The laboratory analytical results for all other composite soil samples collected from soils remaining at the Site indicate that total BTEX is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for composite soil samples S-5 and S-8 indicate total combined TPH GRO/DRO/MRO concentrations of 11 mg/kg and 83 mg/kg, respectively, which are less than the applicable NM 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 that total combined TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for the composite soil samples collected from soils remaining at the Site indicate chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable NM EMNRD OCD closure criteria of 600 mg/kg.

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

6.2 Water Data Evaluation

Ensolum compared the laboratory analytical results associated with the water samples to the NM WQCC Human Health Standards (HHSs) and Domestic Water Supply Standards (DWSSs). The results of the water sample analyses are summarized in **Table 2** and **Table 3** of **Appendix F**.

Excavation and Temporary Sampling Points
Although the water associated with sample GW-1 did not exhibit COC concentrations above the applicable WQCC GQSs, the water was removed by total fluids pumping (utilizing a spec-truck). Sample GW-1 is not included in the following discussion.

- The laboratory analytical results for samples TW-1 and TW-2 do not indicate benzene concentrations above the laboratory PQL/RL, which are below the WQCC HHS of 5 micrograms per liter (µg/L).

- The laboratory analytical results for samples TW-1 and TW-2 do not indicate toluene concentrations above the laboratory PQL/RL, which are below the WQCC HHS of 1,000 µg/L.

- The laboratory analytical results for samples TW-1 and TW-2 do not indicate ethylbenzene concentrations above the laboratory PQL/RL, which are below the WQCC HHS of 700 µg/L.

- The laboratory analytical results for samples TW-1 and TW-2 do not indicate total xylene concentrations above the laboratory PQL/RL, which are below the WQCC HHS of 620 µg/L.

- The laboratory analytical result for sample TW-2 indicates a styrene concentration of 1.1 µg/L. The WQCC does not have an established standard for styrene.

Cations/Anions

- The laboratory analytical results for samples TW-1 and TW-2 indicate fluoride concentrations below the laboratory PQLs/RLs, which are less than the WQCC HHS of 1.6 mg/L.
- The laboratory analytical results for samples TW-1 and TW-2 indicate chloride concentrations of 2.8 mg/L and 3.5 mg/L, respectively, which are below the WQCC DWSS of 250 mg/L.
- The laboratory analytical results for samples TW-1 and TW-2 indicate sulfate concentrations of 45 mg/L and 59 mg/L, respectively, which are below the WQCC DWSS of 600 mg/L.
- The laboratory analytical results for samples TW-1 and TW-2 indicate Nitrate + Nitrite concentrations below the laboratory PQLs/RLs, which are less than the WQCC HHS of 11 mg/L.
- The laboratory analytical results for samples TW-1 and TW-2 indicate bromide concentrations below the laboratory PQLs/RLs. There is no WQCC standard established for bromide.
- The laboratory analytical results for samples TW-1 and TW-2 indicate phosphorous concentrations below the laboratory PQLs/RLs. There is no WQCC standard established for phosphorous.
- The laboratory analytical results for samples TW-1 and TW-2 indicate calcium concentrations of 68 mg/L and 92 mg/L, respectively. There is no WQCC standard established for calcium.
- The laboratory analytical results for samples TW-1 and TW-2 indicate magnesium concentrations of 11 mg/L and 14 mg/L, respectively. There is no WQCC standard established for magnesium.
- The laboratory analytical results for samples TW-1 and TW-2 indicate potassium concentrations of 2.4 mg/L and 6.3 mg/L, respectively. There is no WQCC standard established for potassium.
- The laboratory analytical results for samples TW-1 and TW-2 indicate sodium concentrations of 17 mg/L and 20 mg/L, respectively. There is no WQCC standard established for sodium.

pH

- The laboratory analytical results for samples TW-1 and TW-2 indicate pH of 7.78 and 7.67, respectively, which are within the WQCC DWSS pH range of 6 to 9.

TDS

- The laboratory analytical results for samples TW-1 and TW-2 indicate TDS concentrations of 290 mg/L and 292 mg/L, respectively, which are below the WQCC DWSS of 1,000 mg/L.

Conductivity

- The laboratory analytical results for samples TW-1 and TW-2 indicate conductivity values of 420 micromhos per centimeter (µmhos/cm) and 470 µmhos/cm, respectively. There is no WQCC standard established for conductivity.

Total Alkalinity

- The laboratory analytical results for samples TW-1 and TW-2 indicate total alkalinity concentrations of 169.3 mg/L Calcium (Ca) and 178.5 mg/L Ca, respectively. There is no WQCC standard established for total alkalinity.

7.0 RECLAMATION AND REVEGETATION

The excavation was backfilled with imported fill and laboratory-confirmed stockpiled soil and was then contoured to surrounding grade. The temporary sampling points were removed from the Site during contouring activities. Enterprise will re-seed the Site with an approved seeding mixture.

8.0 FINDINGS

- Eight (8) composite soil samples were collected from the excavation and six (6) composite soil samples were collected from excavated stockpiled soils. Based on laboratory analytical results the soils remaining in place at the Site do not exhibit COC concentrations above the applicable NM EMNRD OCD closure criteria.

- Approximately 180 cubic yards of petroleum hydrocarbon affected soils and 10 bbls of water were transported to the IEI landfarm for disposal/remediation. The excavation was backfilled using imported fill and laboratory-confirmed stockpiled soils and was then contoured to the surrounding grade.

- COC concentrations in groundwater were not identified in samples above the applicable WQCC HHSs or DWSSs.

9.0 RECOMMENDATION

Based upon the information provided herein, no additional investigation or corrective action appears warranted at this time.

10.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

10.1 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).

10.2 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.

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10.3 Reliance

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

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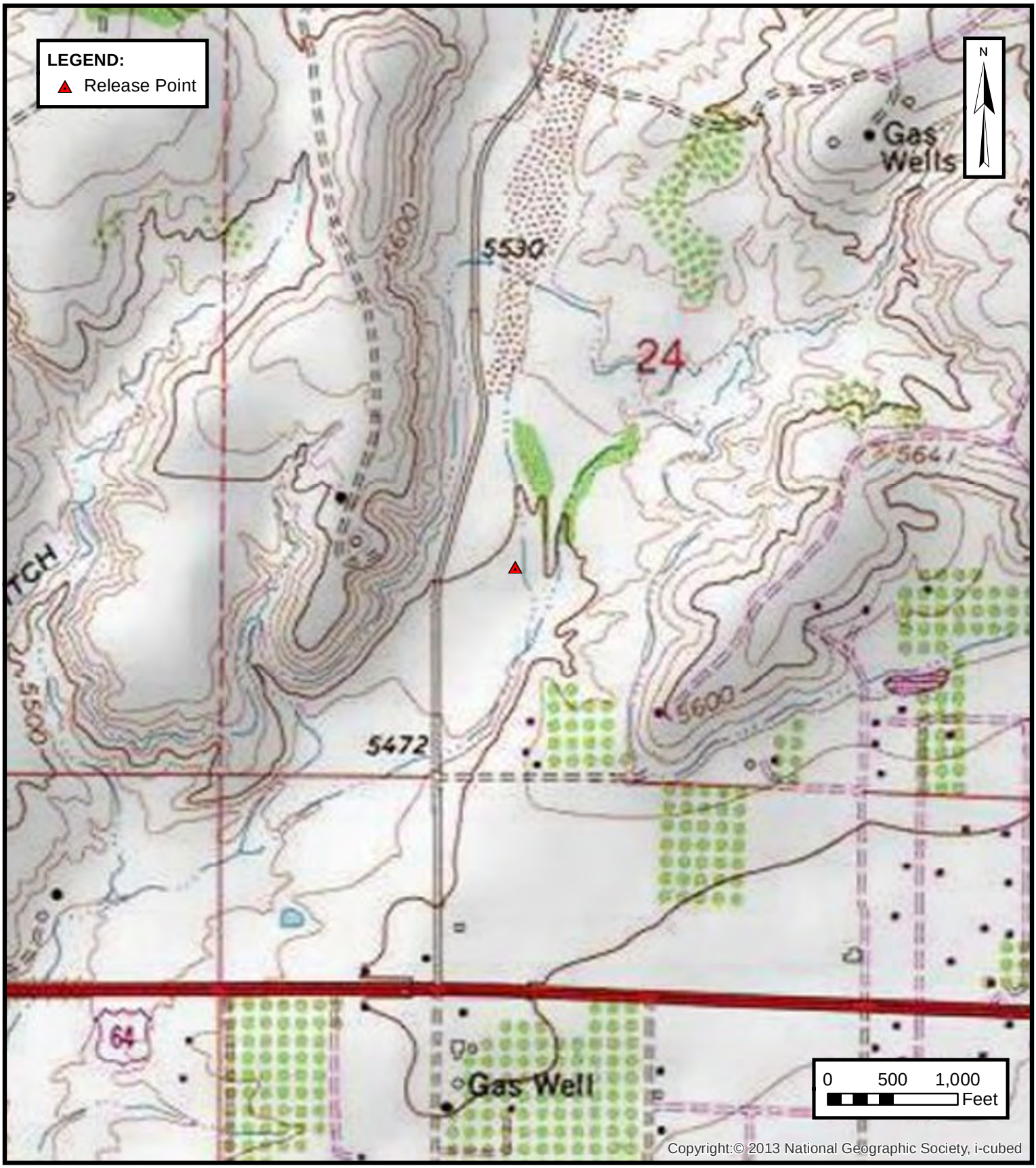
APPENDIX A

Figures



ENSOLUM
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE
1

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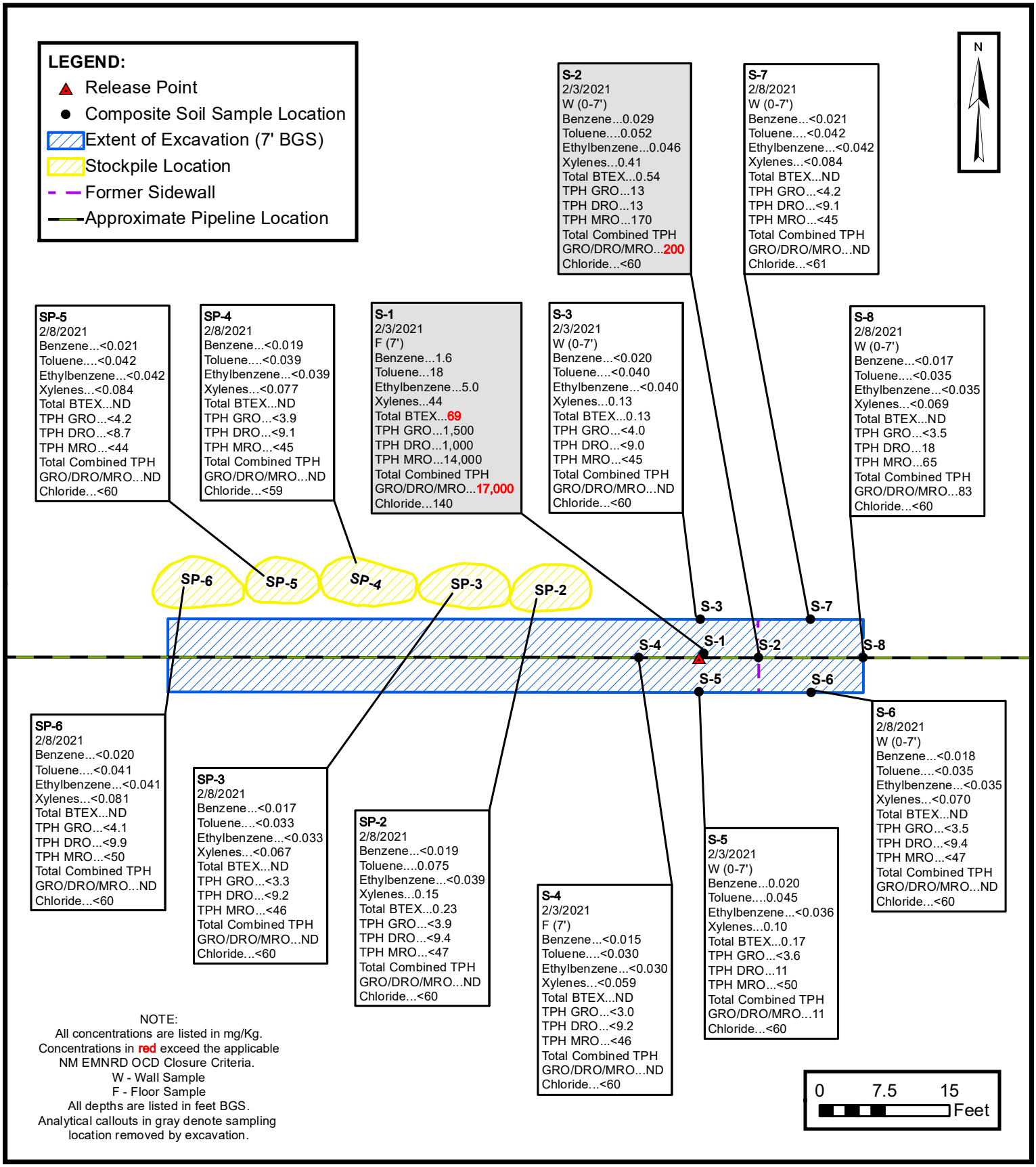
SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE
2



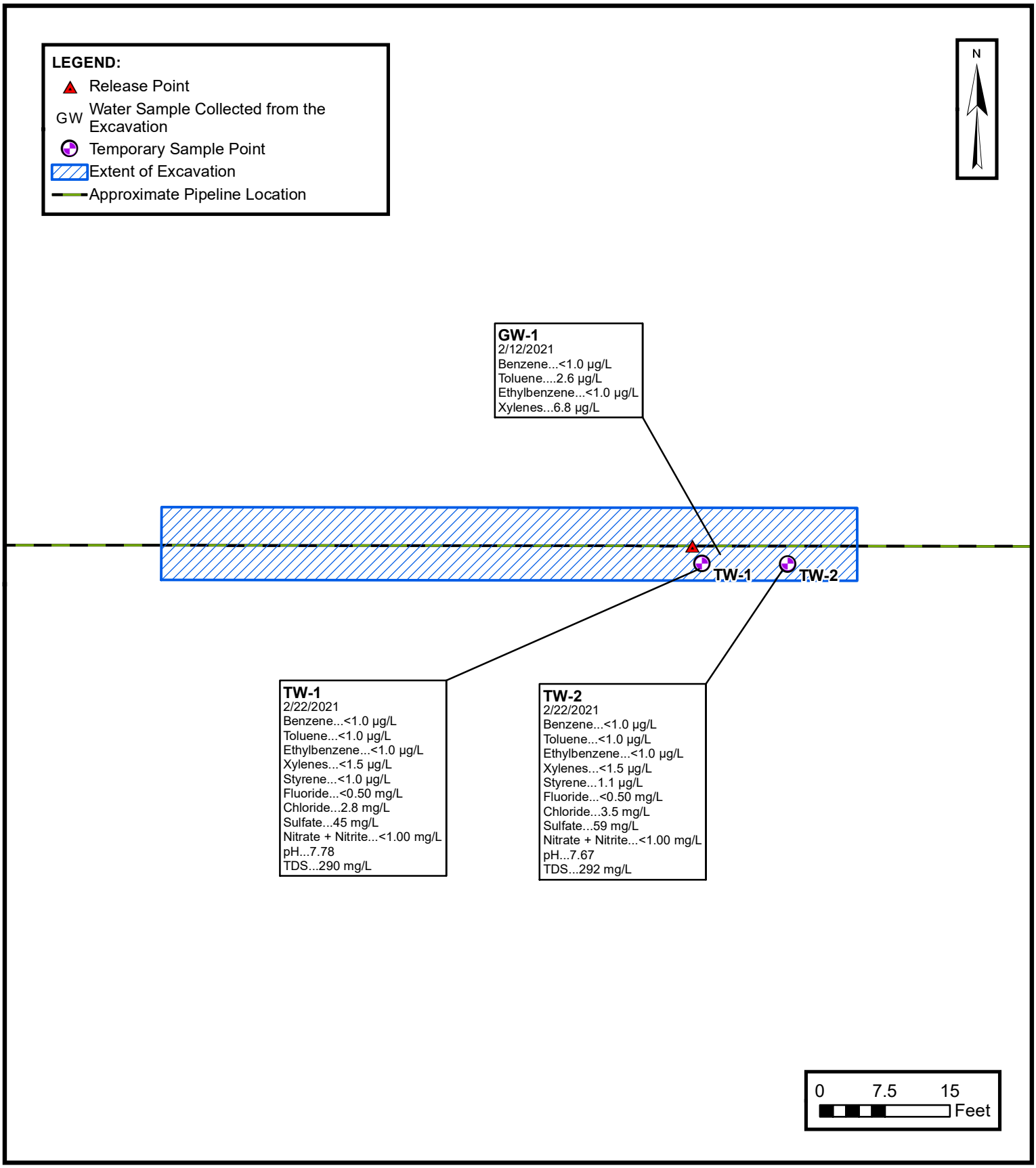
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE MAP WITH SOIL ANALYTICAL RESULTS

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE
3



ENSOLUM
Environmental & Hydrogeologic Consultants

SITE MAP WITH WATER ANALYTICAL RESULTS

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE
4

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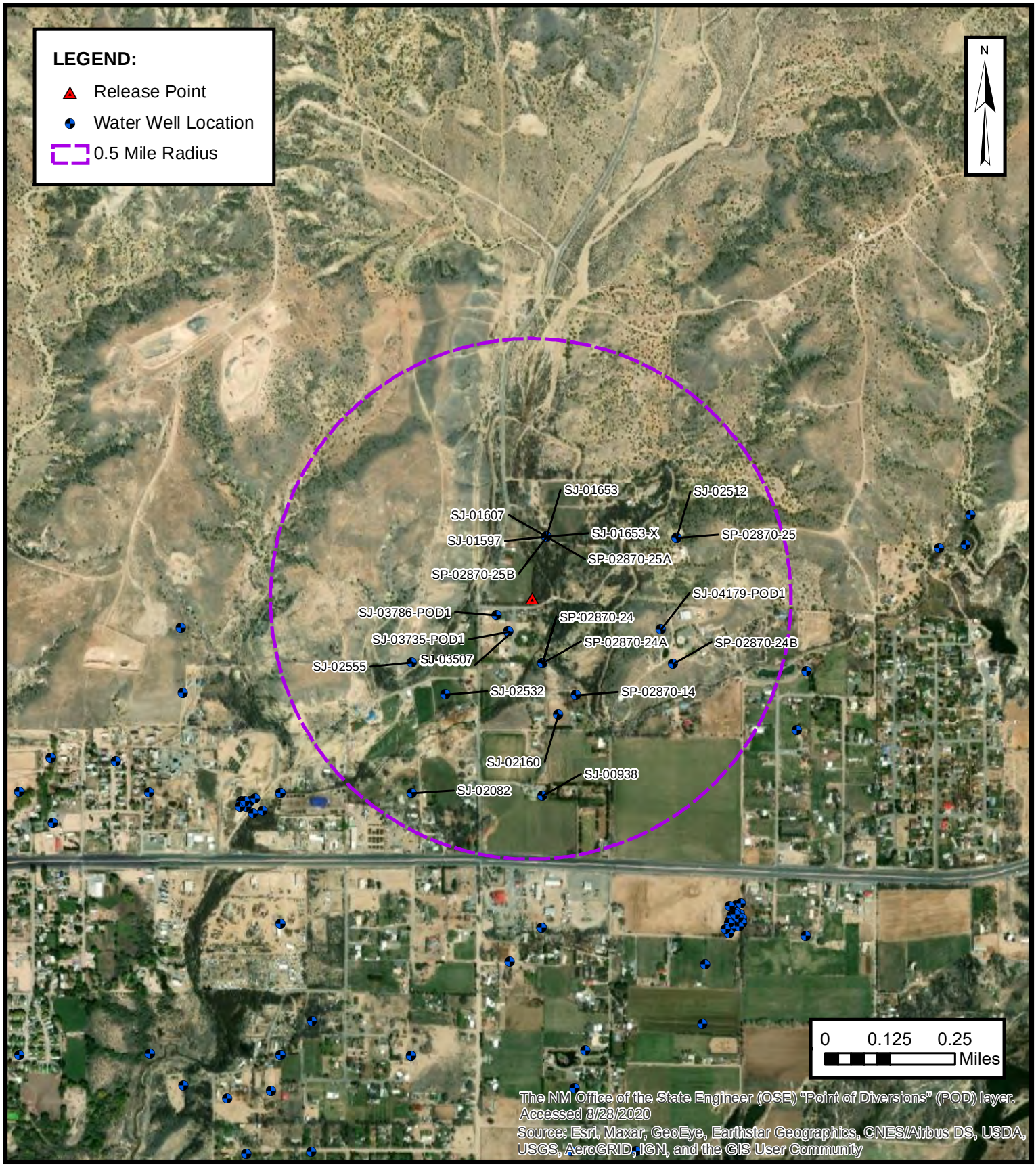
APPENDIX B

Siting Figures and Documentation



ENSOLUM
Environmental & Hydrogeologic Consultants

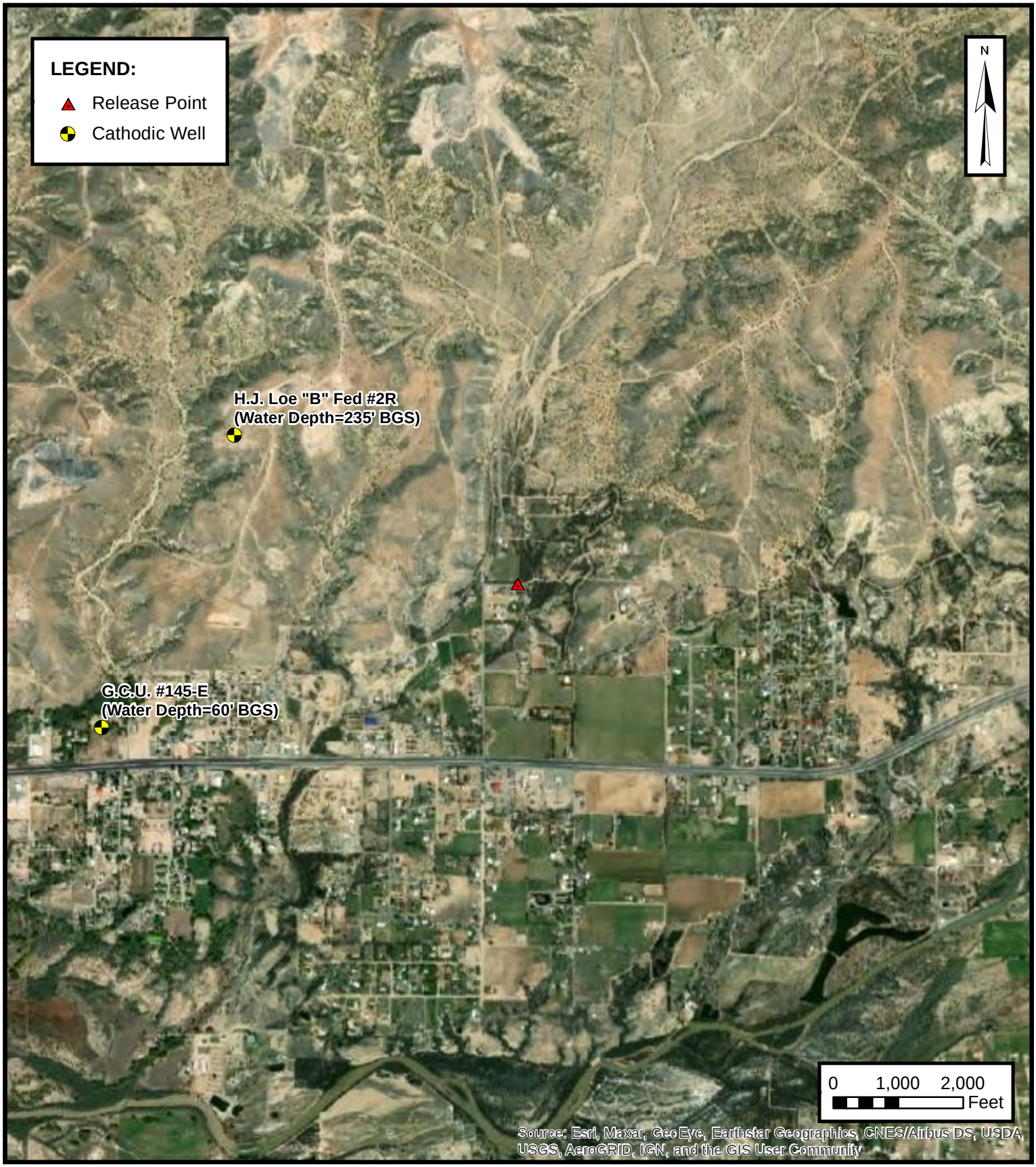
0.5 MILE RADIUS WATER WELL MAP

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE

A



ENSOLUM
Environmental & Hydrogeologic Consultants

CATHODIC PROTECTION WELL RECORDED DEPTH TO WATER

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE

B

ENSOLUM
Environmental & Hydrogeologic Consultants

300 FOOT RADIUS
WATERCOURSE AND DRAINAGE IDENTIFICATION
ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE
C

ENSOLUM
Environmental & Hydrogeologic Consultants

300 FOOT RADIUS
OCCUPIED STRUCTURE IDENTIFICATION
ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE
D

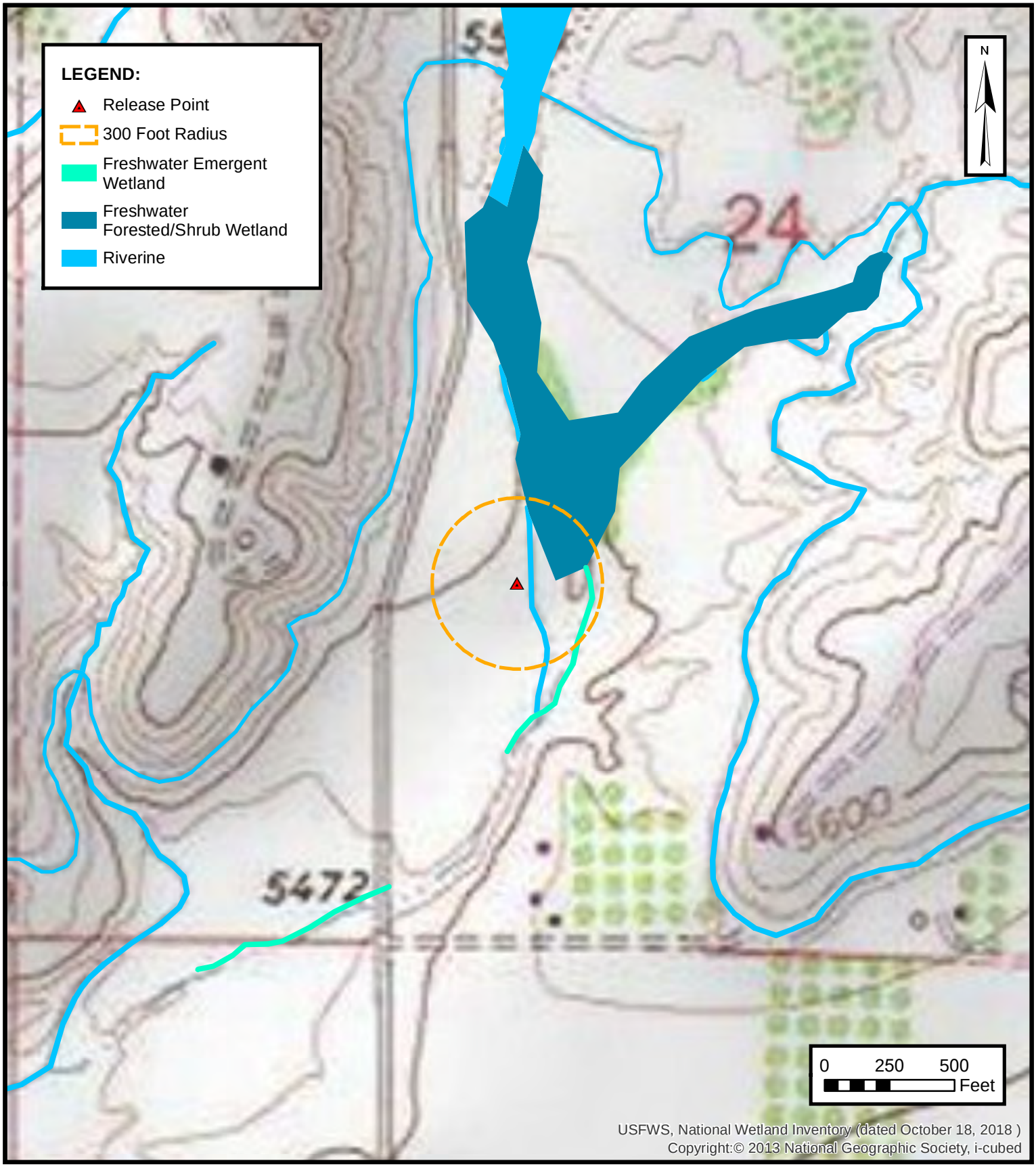
ENSOLUM
Environmental & Hydrogeologic Consultants

WATER WELL AND NATURAL SPRING LOCATION

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE
E



ENSOLUM
Environmental & Hydrogeologic Consultants

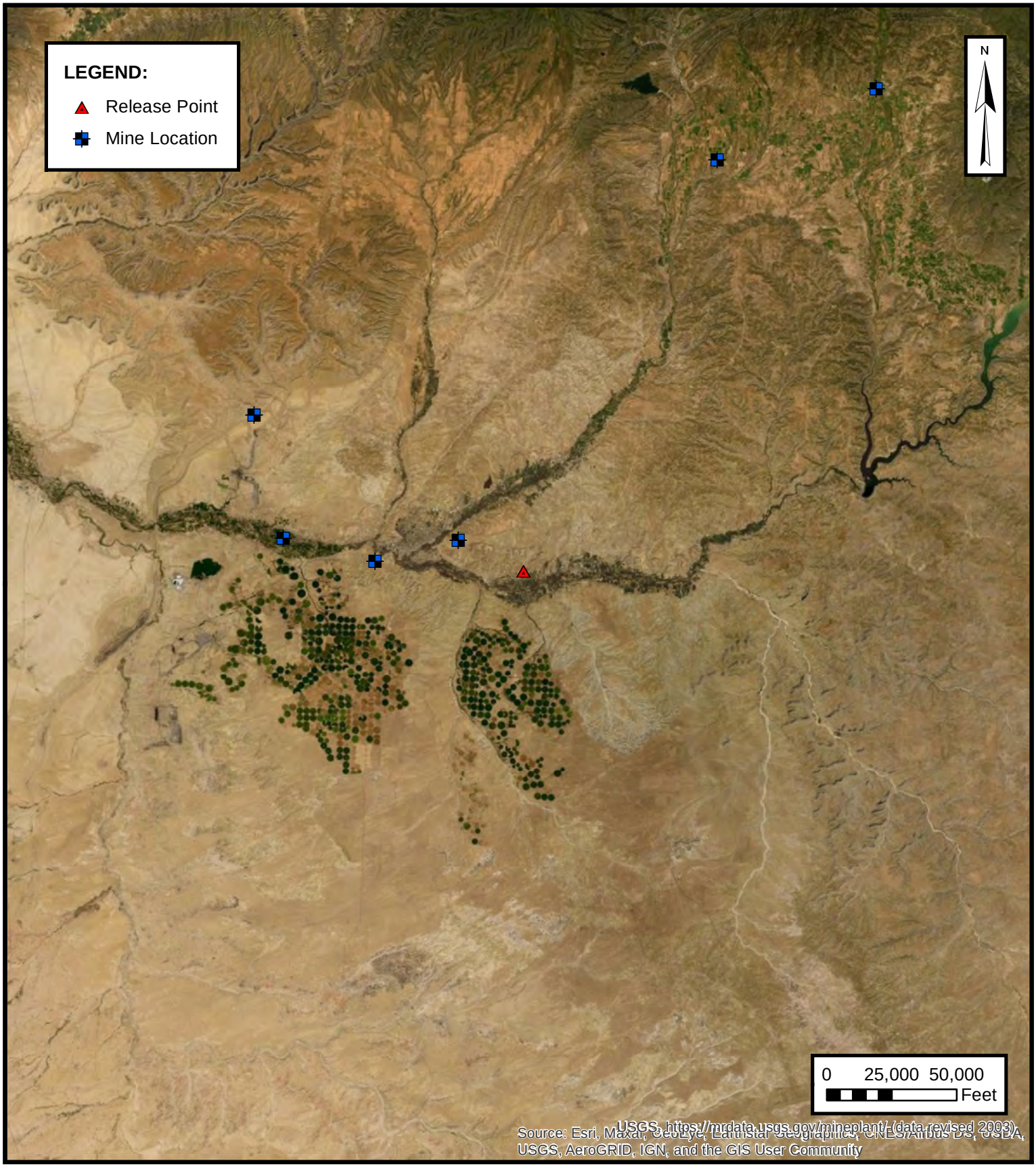
WETLANDS

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE

F



ENSOLUM
Environmental & Hydrogeologic Consultants

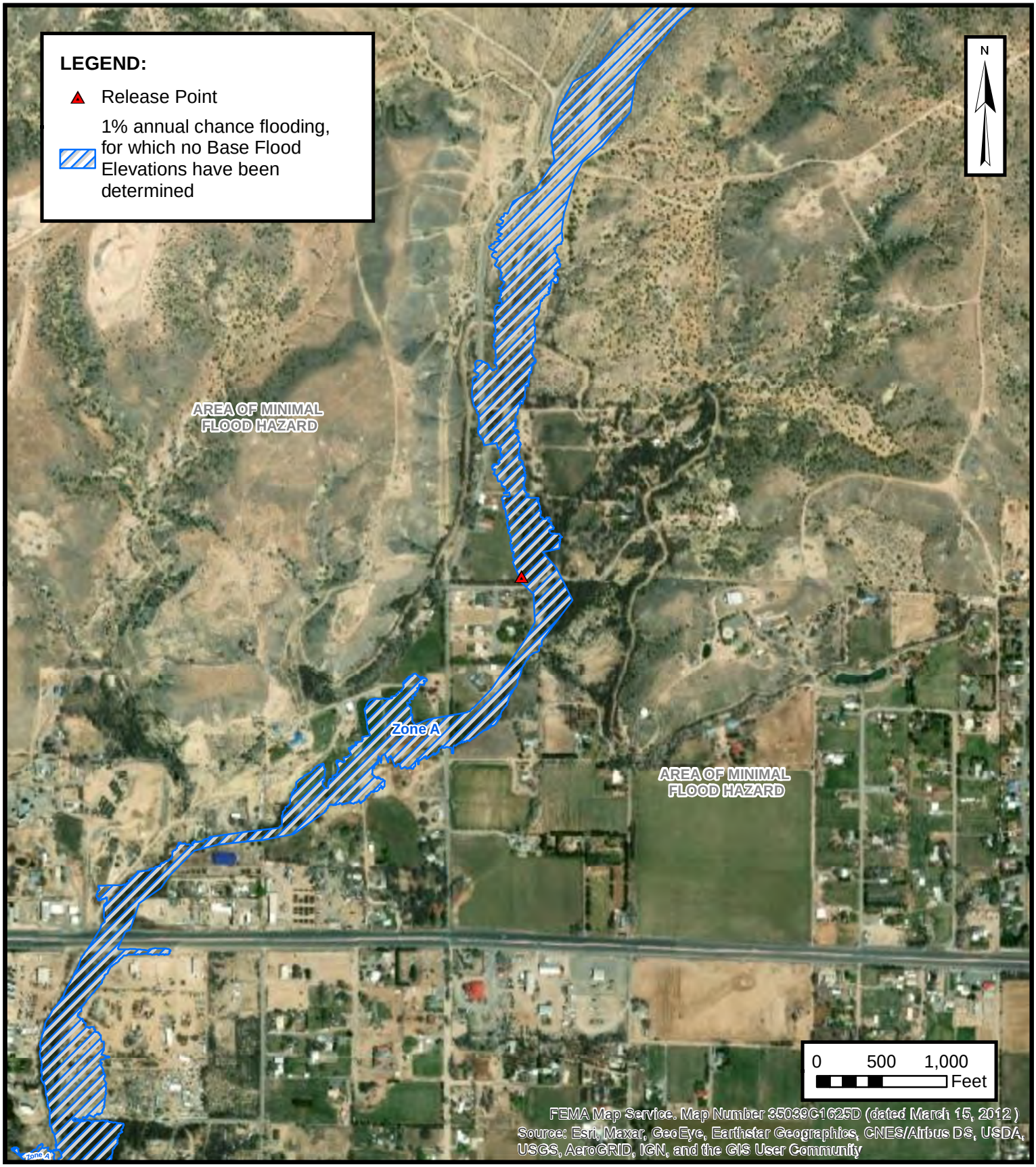
MINES, MILLS AND QUARRIES

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE

G



ENSOLUM
Environmental & Hydrogeologic Consultants

100-YEAR FLOOD PLAIN MAP

ENTERPRISE FIELD SERVICES, LLC
CRAWFORD GC B#1E (02/01/21)
SW ¼, S24 T29N R12W, San Juan County, New Mexico
36.7082° N, 108.0536° W

PROJECT NUMBER: 05A1226137

FIGURE

H

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

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

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

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

POD Number		POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 00112		SJM2	SJ		4	3	26	29N	12W	225611	4065116*	47	26	21
SJ 00399		SJM2	SJ	2	2	4	26	29N	12W	226523	4065593*	45	25	20
SJ 00400		SJM2	SJ		4	3	24	29N	12W	227265	4066668*	83	35	48
SJ 00548		SJM2	SJ		1	1	14	29N	12W	225368	4069558*	180	60	120
SJ 00570		SJM2	SJ		1	3	25	29N	12W	226824	4065478*	36	18	18
SJ 00617		SJM2	SJ	3	4	1	25	29N	12W	227136	4065756*	47	20	27
SJ 00652		SJM2	SJ		4	1	25	29N	12W	227237	4065857*	42	20	22
SJ 00706		SJM2	SJ		4	1	25	29N	12W	227237	4065857*	49	20	29
SJ 00763		SJM2	SJ		3	4	25	29N	12W	227606	4065063*	60	20	40
SJ 00777		SJM2	SJ		1	2	26	29N	12W	226048	4066310*	47	20	27
SJ 00938		SJM2	SJ		2	1	25	29N	12W	227251	4066262*	80	40	40
SJ 01109		SJM2	SJ	1	1	2	26	29N	12W	225947	4066409*	100	70	30
SJ 01194		SJM2	SJ		4	2	26	29N	12W	226437	4065895*	38	12	26
SJ 01322		SJM2	SJ		4	1	25	29N	12W	227237	4065857*	42	20	22
SJ 01326		SJM2	SJ		2	4	26	29N	12W	226424	4065494*	50	27	23
SJ 01466		SJM2	SJ		4	2	25	29N	12W	228045	4065806*	27	14	13
SJ 01597		SJM2	SJ		2	3	24	29N	12W	227290	4067056*	40	15	25
SJ 01802		SJM2	SJ		2	4	26	29N	12W	226424	4065494*	70	18	52
SJ 01802 POD2	R	SJM2	SJ	3	2	4	26	29N	12W	226257	4065365	34	11	23
SJ 01954		SJM2	SJ		1	3	26	29N	12W	225225	4065528*	55	20	35
SJ 01956		SJM2	SJ		1	3	26	29N	12W	225225	4065528*	50	18	32
SJ 01996		SJM2	SJ		2	3	26	29N	12W	225624	4065519*	75	17	58
SJ 02082		SJM2	SJ		1	1	25	29N	12W	226852	4066282*	30	3	27
SJ 02132		SJM2	SJ	1	3	4	25	29N	12W	227505	4065162*	40	12	28
SJ 02496		SJM2	SJ	4	1	1	26	29N	12W	225351	4066241*	35	20	15
SJ 02555		SJM2	SJ		3	3	24	29N	12W	226865	4066683*	21	6	15

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

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

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

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

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 03052		SJM2	SJ	4	1	3	26	29N	12W	225324	4065427*	29	15	14
SJ 03104		SJM2	SJ	2	4	4	26	29N	12W	226509	4065193*	50		
SJ 03173		SJM2	SJ	2	4	3	25	29N	12W	227306	4065169*	60	10	50
SJ 03325		SJM2	SJ	1	4	4	26	29N	12W	226309	4065193*	45	14	31
SJ 03327		SJM2	SJ	1	4	4	26	29N	12W	226309	4065193*	95	70	25
SJ 03329		SJM2	SJ	3	4	4	26	29N	12W	226309	4064993*	40	12	28
SJ 03337		SJM2	SJ	2	2	1	26	29N	12W	225749	4066425*	50		
SJ 03338		SJM2	SJ	2	2	1	26	29N	12W	225749	4066425*	50		
SJ 03339		SJM2	SJ	2	2	1	26	29N	12W	225749	4066425*	50		
SJ 03340		SJM2	SJ	3	3	3	25	29N	12W	226708	4064976*	45	12	33
SJ 03341		SJM2	SJ	3	4	4	26	29N	12W	226309	4064993*	50		
SJ 03414		SJM2	SJ	2	1	1	14	29N	12W	225524	4069656	90	70	20
SJ 03507		SJM2	SJ	1	4	3	24	29N	12W	227164	4066767*	60		
SJ 03580	O		SJ	4	4	3	25	29N	12W	227306	4064969*	20	4	16
SJ 03580 POD1		SJM2	SJ	4	4	3	25	29N	12W	227306	4064969*	20	4	16
SJ 03735 POD1		SJM2	SJ	1	4	3	24	29N	12W	227164	4066767*	100	15	85
SJ 03786 POD1		SJM2	SJ	1	4	3	24	29N	12W	227128	4066819	35	11	24
SJ 03789 POD1		SJM2	SJ	3	2	4	26	29N	12W	226392	4065383	40	14	26
SJ 04108 POD1		SJM2	SJ	2	2	3	25	29N	12W	227358	4065478	70	14	56
SJ 04179 POD1		SJM2	SJ	1	3	4	24	29N	12W	227631	4066759	280	180	100
SJ 04286 POD1		SJ	SJ		2	2	26	29N	12W	226354	4066272	13	5	8
SJ 04286 POD2		SJ	SJ		2	2	26	29N	12W	226344	4066257	14	5	9
SJ 04287 POD1		SJ	SJ		3	2	25	29N	12W	227820	4065877	23	15	8
SJ 04287 POD12		SJ	SJ		3	2	25	29N	12W	227830	4065879	23		
SJ 04287 POD2		SJ	SJ		3	2	25	29N	12W	227835	4065879	23	15	8

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

Average Depth to Water: **24 feet**

Minimum Depth: **3 feet**

Maximum Depth: **180 feet**

Record Count: 51

PLSS Search:

Section(s): 24, 13, 14, 23, 26, 25 **Township:** 29N **Range:** 12W

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

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 00875	SJM2	SJ		1	4	30	29N	11W	229229	4065336*	37	20	17
SJ 01250	SJM2	SJ		4	4	19	29N	11W	229660	4066529*	60	20	40
SJ 01260	SJM2	SJ		2	2	30	29N	11W	229650	4066123*	42	16	26
SJ 01264	SJM2	SJ		2	2	30	29N	11W	229650	4066123*	27	12	15
SJ 01328	SJM2	SJ		2	2	30	29N	11W	229650	4066123*	28	15	13
SJ 01391	SJM2	SJ			2	30	29N	11W	229441	4065939*	40	25	15
SJ 01641	SJM2	SJ	3	2	2	19	29N	11W	229603	4067633*	120	55	65
SJ 01821	SJM2	SJ		4	2	30	29N	11W	229639	4065717*	70	6	64
SJ 02026	SJM2	SJ		1	3	19	29N	11W	228572	4066989	27	6	21
SJ 02970	SJM2	SJ	2	3	4	19	29N	11W	229361	4066647*	100	18	82
SJ 03348	SJM2	SJ	3	1	2	30	29N	11W	229150	4066042*	60		
SJ 04117 POD1	SJM2	SJ	4	2	2	30	29N	11W	229689	4066051	50	15	35
SJ 04392 POD1	SJM2	SJ		4	2	19	29N	11W	229747	4066925	60		

Average Depth to Water: **18 feet**
Minimum Depth: **6 feet**
Maximum Depth: **55 feet**

Record Count: 13

PLSS Search:

Section(s): 18, 19, 30 **Township:** 29N **Range:** 11W

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

3235

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

30-045-24291

Operator E.P.F.S. Location: Unit D NW Sec. 26 Twp 29 Rng 12

Name of Well/Wells or Pipeline Serviced G.C.U. #145-E Mtr # 93462

Elevation _____ Completion Date 5-2-97 Total Depth 320 Land Type * E SF 079907

Casing, Sizes, Types & Depths 8 5/8 PVC. 20'

If Casing is cemented, show amounts & types used 10 BAGS

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

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

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

RECEIVED
OCT 14 1997
OIL CON. DIV.
DIST. 3

Depths gas encountered: —

Type & amount of coke breeze used: Asbury 50

Depths anodes placed: 95-300

Depths vent pipes placed: 305

Vent pipe perforations: 220

Remarks: Azurite

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.

THE LOFTIS COMPANY

DEEP WELL GROUNDBED DATA

DATE May 2, 1997

COMPANY EPFS/Amoco COUNTY San Juan STATE NM

CONTRACT NO. FC-96-1000 UNIT NO. 93462

LOCATION Gallegos CU #145E

GROUNDBED: DEPTH 320 FT., DIA. 7 7/8 IN., ANODES (10) 2 x 60 SHA-2

CASING: SIZE 8 IN., DEPTH 20 FT.

DEPTH FT.	DRILLER'S LOG	RESISTIVITY OHMS	RESISTIVITY AMPS	ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
5	Casing						
10	"						
15	"						
20	Shale						
25	"						
30	"						
35	"						
40	"						
45	"		1.2				
50	"		1.0				
55	"		0.7				
60	"		0.9				
65	"		0.7				
70	"		1.0				
75	"		1.8				
80	"		1.9				
85	"		1.9				
90	"		1.5				
95	"		1.5	10	95	1.7	6.2
100	"		1.6				
105	"		1.6	9	105	1.6	5.7
110	"		1.5				
115	"		1.9	8	114	1.9	6.8
120	"		1.8	7	122	1.8	6.7
125	"		1.6				
130	"		1.6	6	132	1.8	6.5
135	"		1.2				
140	"		1.0				
145	"		1.1				
150	"		1.0				
155	"		0.9				
160	Sandstone & Shale		0.9				
165	"		0.8				
170	"		0.7				
175	"		0.7				
180	"		0.8				
185	"		1.4				
190	"		1.5	5	190	1.5	4.8
195	"		1.0				
200	"		1.1				
205	"		1.1				
210	Shale		0.9				
215	"		0.8				
220	"		0.8				
225	"		0.9				
230	"		0.8				
235	"		0.8				
240	Shale		0.8				

PAGE 2 OF 2

COMPANY EPFS/Amoco DATE May 2, 1997

LOCATION Gallegos CU #145E UNIT NO. 93462

DEPTH FT	DRILLER'S LOG	RESISTIVITY OHMS	AMPS	ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
245	Shale		0.8				
250	Sandstone		0.8				
255	"		0.7				
260	"		0.8				
265	"		0.7				
270	"		0.4				
275	"		0.2				
280	Shale		1.8	4	280	1.8	5.3
285	"		2.0				
290	"		1.8	3	288	2.1	6.0
295	"		1.8	2	294	1.8	5.5
300	"		1.5	1	300	1.6	5.1
305	"		1.7				
310	"						
315	"						
320	Shale						
325							
330							
335							
340							
345							
350							
355							
360							
365							
370							
375							
380							
385							
390							
395							
400							
405							
410							
415							
420							
425							
430							
435							
440							
445							
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480							
485							
490							
495							
500							
505							
510							

30-045-22163

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

Operator TEXACO E&P Inc. Location: Unit G Sec. 23 Twp 29N Rng 12W

Name of Well/Wells or Pipeline Serviced H.J. Loe "B" Fed #2R

Elevation ____ Completion Date 4/19/89 Total Depth 380' Land Type* ____

Casing, Sizes, Types & Depths 6 3/4" hole to 380'

If Casing is cemented, show amounts & types used Unknown

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

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

Fresh, Clear, Salty, Sulphur, Etc. See attached log

Depths gas encountered: ____

Type & amount of coke breeze used: ____

Depths anodes placed: See attached log

Depths vent pipes placed: ____

Vent pipe perforations: ____

Remarks: ____

RECEIVED
MAR 2 1992
OIL CON. DIV.
DIST. 3

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

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

WELL TYPE GROUNDBED DATA

DATA SHEET NO. 1

COMPANY TEXACO INC JOB No. 6142 DATE: 5-19-71

WELL: H.J. LEE "B" FEDERAL WELL #12 PIPELINE:

LOCATION: SEC. 23 TWP. 29N RGE. 12W CO. SAN JUAN STATE NEW MEX

ELEV. _____ FT: ROTARY 380 FT: CABLE TOOL _____ FT: CASING _____ FT.

GROUNDBED: DEPTH 380 FT. DIA. 6 3/4 IN. GAB _____ LBS. ANODES 10 1½X60" CO-51

DEPTH, FT.	DRILLER'S LOG	DRILL PIPE TO STRUCTURE E	DRILL PIPE TO STRUCTURE I	DRILL PIPE TO STRUCTURE R	EXPLORING ANODE TO STRUCTURE E	EXPLORING ANODE TO STRUCTURE I	EXPLORING ANODE TO STRUCTURE R	DEPTH, TOP OF ANODES
0-5	SAND & BOULDERS							
5-10								
10-15								
15-20	SAND							
20-25								
25-30								6
30-35								
35-40								
40-45								
45-50								
50-55								
55-60								
60-65								
65-70								
70-75								
75-80								
80-85								
85-90								
90-95								
95-100								
100-105	SHALE w/ SAND STRINGERS							
105-110								
110-115								
115-120								
120-125								
125-130								
130-135								
135-140								
140-145								
145-150								
150-155								
155-160								
160-165								
165-170								
170-175								
175-180								
180-185								
185-190								
190-195						.10		
195-200						.10		
200-205						3.90		
205-210						4.30		
210-215					19.0	4.20		

GROUNDBED RESISTANCE: (1) VOLTS _____ ÷ AMPS _____ = _____ OHMS

(2) VIBROGROUND _____ OHMS

cathodic protection service

HOUSTON TEXAS

ELL TYPE GROUNDBED DA

DATA SHEET NO. 2

COMPANY TEXACO INC. JOB No. 6142 DATE: 5-19-71

WELL: H. J. LOE "A" FEDERAL WELL No. 2 PIPELINE:

LOCATION: SEC. 23 TWP. 29N RGE. 12W CO. SAN JUAN STATE NEW MEX

ELEV. _____ FT: ROTARY 380 FT: CABLE TOOL _____ FT: CASING _____ FT.

GROUNDBED: DEPTH 380 FT. DIA. 6 3/4 IN. GAB _____ LBS. ANODES 10 1½"X60" CD-51

DEPTH, FT.	DRILLER'S LOG	DRILL PIPE TO STRUCTURE E	DRILL PIPE TO STRUCTURE I	DRILL PIPE TO STRUCTURE R	EXPLORING ANODE TO STRUCTURE E	EXPLORING ANODE TO STRUCTURE I	EXPLORING ANODE TO STRUCTURE R	DEPTH, TOP OF ANODES
215-220					13.0	3.0		
220-225						2.40		
225-230						2.50		
230-235						2.60		
235-240	SAND WATER					2.0		
240-245						1.50		
245-250						2.20		
250-255						2.20		
255-260						2.60		
260-265						2.80		255
265-270						3.40		
270-275						2.80		265
275-280						2.10		
280-285						2.10		275
285-290						2.10		
290-295						2.0		285
295-300						2.0		
300-305						1.80		295
305-310						1.40		
310-315						1.60		
315-320	SHALE					2.70		310
320-325						3.10		
325-330						2.40		320
330-335						1.60		
335-340	SAND					1.60		330
340-345						1.60		
345-350						1.90		340
350-355						2.0		
355-360						2.10		350
360-365						1.65		
365-370						1.40		
370-375					13.0	1.40		
375-380								

	ANODES	WATER	COKE		
	1	2.0	2.60		2.40
	2	1.40	2.0		1.80
	3	2.60	3.0		2.60
	4	3.40	3.60		3.40
	5	1.80	1.0	1.10	1.10
	6	2.0	2.05		2.0
	7	2.10	2.40		2.10
	8	2.60	2.90		2.40
	9	2.80	2.40		3.40
	10	2.80	2.80		2.60

GROUNDBED RESISTANCE: (1) VOLTS 12 ÷ AMPS 15 = _____ OHMS

(2) VIBROGROUND _____ OHMS

cathodic protection service

HOUSTON TEXAS

ENSOLUM

APPENDIX C

Regulatory Correspondence

From: Kyle Summers
To: Ranee Deechilly
Subject: FW: Crawford GC B#1E - Unit K Section 24 T29N R12W; 36.70820, -108.05360
Date: Monday, February 22, 2021 7:39:50 AM
Attachments: image003.png
image004.png
image005.png

Kyle Summers
Principal
903-821-5603
Ensolum, LLC

From: Long, Thomas <tjlong@eprod.com>
Sent: Monday, February 22, 2021 7:37 AM
To: Kyle Summers <ksummers@ensolum.com>
Subject: FW: Crawford GC B#1E - Unit K Section 24 T29N R12W; 36.70820, -108.05360

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

From: Long, Thomas
Sent: Friday, February 19, 2021 7:05 AM
To: 'Smith, Cory, EMNRD' <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>; Hernandez, Emily, EMNRD <Emily.Hernandez@state.nm.us>
Subject: RE: Crawford GC B#1E - Unit K Section 24 T29N R12W; 36.70820, -108.05360

Cory,

Due to the weather this week, Enterprise will be backfilling the excavation at the Crawford GC B#1E and installing the temporary well as described below today. The well will developed today as well.

Also, this email services as a notification that Enterprise will be sampling the will on Monday, February 22, 2021 at 10:00 a.m. If you have any questions, please call or email.

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

Enterprise Products

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Wednesday, February 10, 2021 8:25 AM
To: Long, Thomas <tjlong@eprod.com>
Cc: Stone, Brian <bmstone@eprod.com>; Hernandez, Emily, EMNRD <Emily.Hernandez@state.nm.us>
Subject: [EXTERNAL] RE: Crawford GC B#1E - Unit K Section 24 T29N R12W; 36.70820, -108.05360

[Use caution with links/attachments]

Tom,

Thank you for the status update. Please proceeded as described below and provide at least 48 hour notification prior to the collection of the ground water sample.

Thank you,

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Long, Thomas <tjlong@eprod.com>
Sent: Wednesday, February 10, 2021 8:08 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>; Hernandez, Emily, EMNRD <Emily.Hernandez@state.nm.us>
Subject: [EXT] RE: Crawford GC B#1E - Unit K Section 24 T29N R12W; 36.70820, -108.05360

Cory,

Please find the attached site sketch and lab report for the Crawford GC B#1E excavation and soil stockpiles sample results. All sample results are below the NMOCD Tier I soil remediation standards. Soil stockpiles associated with soil samples SP-2 through SP-6 will be used as backfill material. Stockpile SP-1 and the other two stockpiles the east will be disposed of at a properly permitted facility. Enterprise will pump water from the excavation and disposed of it at a properly permitted facility. During backfill activities, Enterprise will install a temporary well. The temporary well will be developed and allowed to sit for at least 24 hours after development activities prior to sampling. A groundwater sample with be collected from the well and sampled for the following: 8260 BTEX (Long list), Cation, Anion, and pH, and TDS.

If you have any questions, please call or mail.

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

Enterprise Products

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Monday, February 8, 2021 8:41 AM
To: Long, Thomas <tjlong@eprod.com>
Cc: Stone, Brian <bmstone@eprod.com>; Hernandez, Emily, EMNRD <Emily.Hernandez@state.nm.us>
Subject: [EXTERNAL] RE: Crawford GC B#1E - Unit K Section 24 T29N R12W; 36.70820, -108.05360

[Use caution with links/attachments]

Tom,

Thank you for the update, please sample the water for 8260 BTEX (Long list), Cation, Anion, and ph, and TDS.

Cory Smith • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1000 Rio Brazos | Aztec, NM 87410

505.334.6178 x115 | Cory.Smith@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Long, Thomas <tjlong@eprod.com>
Sent: Monday, February 8, 2021 8:28 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>; Hernandez, Emily, EMNRD <Emily.Hernandez@state.nm.us>
Subject: [EXT] RE: Crawford GC B#1E - Unit K Section 24 T29N R12W; 36.70820, -108.05360

Cory,

This email is to notify you that groundwater was observed in the excavation this morning. Upon completion of the soil remediation, Entperise will pump groundwater out of the excavation prior to backfilling. Upon backfilling the excavation, Entperise will install a temporary well/hydro punch to evaluate potential groundwater contamination. If you have any questions, please call or email.

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

Enterprise Products

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Saturday, February 6, 2021 10:41 AM
To: Long, Thomas <tjlong@eprod.com>
Cc: Stone, Brian <bmstone@eprod.com>; Hernandez, Emily, EMNRD <Emily.Hernandez@state.nm.us>
Subject: [EXTERNAL] RE: Crawford GC B#1E - Unit K Section 24 T29N R12W; 36.70820, -108.05360

[Use caution with links/attachments]
Tom,

Thank you for the follow up, Please submit a C-141 no later than February 16, 2021.

OCD approves the sampling method for the stock piles that were stripped during pipeline excavation. In the event that ground water is encounter please contact me asap prior to collecting samples etc.

Thanks,

Cory Smith • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1000 Rio Brazos | Aztec, NM 87410
505.334.6178 x115 | Cory.Smith@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Long, Thomas <tjlong@eprod.com>
Sent: Friday, February 5, 2021 9:10 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXT] RE: Crawford GC B#1E - Unit N Section 24 T29N R12W; 36.70820, -108.05360

Cory,

This email is a notification that Enterprise will be collecting soil samples for laboratory analysis at the Crawford GC B#1E excavation on Monday, February 8, 2021 at 11:00 a.m. Also, Entperise will also be collecting soil samples from the stockpiled soil adjacent to the excavation in 50 yard volumes. The stockpile soil samples will be five-point composite samples from within the stockpiles. All soil samples will be analyzed for Methods 8021BTEX, 8015 DRO/GRO/MRO and Chlorides. If groundwater is encountered within the excavation, a groundwater sample will be collected and analyzed from Method 8260 VOC's . If you have any questions, please call or email.

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

Enterprise Products

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Friday, February 5, 2021 6:36 AM
To: Long, Thomas <tjlong@eprod.com>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXTERNAL] RE: Crawford GC B#1E - Unit N Section 24 T29N R12W; 36.70820, -108.05360

[Use caution with links/attachments]
Tom,

Quick follow up since this is near homes, there was no road closures or any type of EMS or anything of that nature correct?

Cory Smith • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1000 Rio Brazos | Aztec, NM 87410
505.334.6178 x115 | Cory.Smith@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Long, Thomas <tjlong@eprod.com>
Sent: Thursday, February 4, 2021 3:07 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXT] Crawford GC B#1E - Unit N Section 24 T29N R12W; 36.70820, -108.05360

Cory,

This email is a notification that Entperise had a release of natural gas and condensate on the Crawford GC B#1E pipeline on February 1, 2021. No liquids were observed on the ground surface. The release is located near a wash (blue line on a topo map). Enterprise determined this release reportable on February 3, 2021, due the volume of impacted subsurface soil. The release is located at Unit N Section 24 T29N R12W; 36.70820, -108.05360. I have attached a site sketch and lab report of the initial sampling. Groundwater may encountered due the required remediation at the base of the excavation. I will keep you informed as the when we will be collecting soil samples for laboratory analysis. If you have any questions, please call or email.

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

ENSOLUM

APPENDIX D

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
220 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

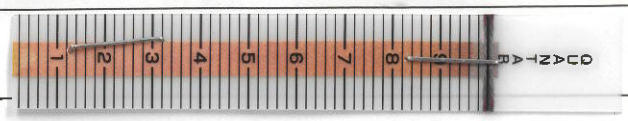
Form C-138
Revised 08/01/11

*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

2. Originating Site:
Crawford GC B#1E



3. Location of Material (Street Address, City, State or ULSTR):
Unit K Section 24 T29N R12W, San Juan County, NM; 36.70820, -108.05360

4. Source and Description of Waste:
Source: Hydro excavation Spoils from a Leak from a Natural Gas Gathering Line
Description: Soil impacted with Natural Gas Liquids (Condensate and Water)
Estimated Volume 50 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 10 yd³ / bbls

12 Yds 2/10/21
168 Yds - 2/10/21

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, 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 2-3-2021, representative for Enterprise Products Operating authorizes IEI, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

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

5. Transporter: Riley Industrial / Sierra Oil Field

OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. * **Permit #: NM 01-0010B**
Address of Facility: **#49 CR 2150 Aztec, New Mexico**

Cl = 4120 PH = 7

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: Roger Tingley TITLE: Trans Coord DATE: 2/8/21

SIGNATURE: _____ TELEPHONE NO.: 505-632-1782
Surface Waste Management Facility Authorized Agent

2/3

ENSOLUM

APPENDIX E

Photographic Documentation

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Crawford GC B#1E (02/01/21)
Ensolum Project No. 05A1226137

ENSOLUM

Photograph 1 Photograph Description: View of the release point and in-process excavation activities.	
Photograph 2 Photograph Description: View of the stockpiled soils that were sampled to confirm the material was suitable to remain on Site and reuse as backfill.	
Photograph 3 Photograph Description: View of in-process excavation activities.	

SITE PHOTOGRAPHS

Closure Report
Enterprise Field Services, LLC
Crawford GC B#1E (02/01/21)
Ensolum Project No. 05A1226137

ENSOLUM

Photograph 4 Photograph Description: View of the portion of the excavation that was further excavated to facilitate water removal.	
Photograph 5 Photograph Description: View of the excavation after initial restoration showing the temporary sampling points.	

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APPENDIX F

Tables

ENSOLUM

TABLE 1
Crawford GC B#1E (02/01/21)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (Feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX[1] (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (GRO/DRO/MRO)[1] (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria (Tier I)				10	NE	NE	NE	50				100	600
Composite Soil Samples Removed by Excavation and Transported to Landfarm for Disposal/Remediation													
SP-1	2.03.21	C	Stockpile	0.18	0.58	<0.15	0.73	1.5	26	100	840	**970**	<60
S-1	2.03.21	C	7	1.6	18	5.0	44	**69**	1,500	1,000	14,000	**17,000**	140
S-2	2.03.21	C	0 to 7	0.029	0.052	0.046	0.41	0.54	13	13	170	**200**	<60
Samples Collected from Stockpiled Soils													
SP-2	2.08.21	C	Stockpile	<0.019	0.075	<0.039	0.15	0.23	<3.9	<9.4	<47	ND	<60
SP-3	2.08.21	C	Stockpile	<0.017	<0.033	<0.033	<0.067	ND	<3.3	<9.2	<46	ND	<60
SP-4	2.08.21	C	Stockpile	<0.019	<0.039	<0.039	<0.077	ND	<3.9	<9.1	<45	ND	<59
SP-5	2.08.21	C	Stockpile	<0.021	<0.042	<0.042	<0.084	ND	<4.2	<8.7	<44	ND	<60
SP-6	2.08.21	C	Stockpile	<0.020	<0.041	<0.041	<0.081	ND	<4.1	<9.9	<50	ND	<60
Excavation Composite Soil Samples													
S-3	2.03.21	C	0 to 7	<0.020	<0.040	<0.040	0.13	0.13	<4.0	<9.0	<45	ND	<60
S-4	2.03.21	C	7	<0.015	<0.030	<0.030	<0.059	ND	<3.0	<9.2	<46	ND	<60
S-5	2.03.21	C	0 to 7	0.020	0.045	<0.036	0.10	0.17	<3.6	11	<50	11	<60
S-6	2.08.21	C	0 to 7	<0.018	<0.035	<0.035	<0.070	ND	<3.5	<9.4	<47	ND	<60
S-7	2.08.21	C	0 to 7	<0.021	<0.042	<0.042	<0.084	ND	<4.2	<9.1	<45	ND	<61
S-8	2.08.21	C	0 to 7	<0.017	<0.035	<0.035	<0.069	ND	<3.5	18	65	83	<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 or Reporting Limits

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

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TABLE 2
Crawford GC B#1E (02/01/21)
GROUNDWATER ANALYTICAL SUMMARY - DETECTED VOLATILE ORGANIC COMPOUNDS

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Styrene [A] (µg/L)
New Mexico Water Quality Control Commmission Human Health Standards		**5**	**1,000**	**700**	**620**	**NE**
Water Samples Collected from the Excavation						
GW-1	2.12.21	<1.0	2.6	<1.0	6.8	NA
Water Samples Collected from the Temporary Sample Points						
TW-1	2.22.21	<1.0	<1.0	<1.0	<1.5	<1.0
TW-2	2.22.21	<1.0	<1.0	<1.0	<1.5	1.1

Notes:

Concentrations in **bold** and yellow exceed the applicable WQCC HHS

[A] = Constituent is identified as "toxic pollutant" under 20.6.2 New Mexico Administrative Code (NMAC).

µg/L = microgram per liter

NA = Not Analyzed

NE = Not Established

<1.0 = The numeral (in this case "1.0") identifies the laboratory reporting limit (RL) or practical quantitation limit (PQL).

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TABLE 3
Crawford GC B#1E (02/01/21)
GROUNDWATER ANALYTICAL SUMMARY - INORGANICS, PHYSICAL, AND CHEMICAL PROPERTIES

Sample I.D.	Sample Date	Fluoride (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate + Nitrite (mg/L)	Bromide (mg/L)	Phosphorus (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	pH	Total Dissolved Solids (mg/L)	Conductivity (µmhos/cm)	Total Alkalinity (mg/L Ca)
New Mexico Water Quality Control Commmission Human Health Standards and Domestic Water Supply Standards		**1.6**	**250**	**600**	**11**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**6-9**	**1,000**	**NE**	**NE**
Water Samples Collected from the Temporary Sample Points															
TW-1	2.22.21	<0.50	2.8	45	<1.00	<0.50	<2.5	68	11	2.4	17	7.78	290	420	169.3
TW-2	2.22.21	<0.50	3.5	59	<1.00	<0.50	<2.5	92	14	6.3	20	7.67	292	470	178.5

Notes:

Concentrations in **bold** and yellow exceed the applicable WQCC HHS or DWSS

mg/L = milligram per liter

µmhos/cm = micromhos per centimeter

Ca = Calcium

NA = Not Analyzed

NE = Not Established

<1.0 = The numeral (in this case "1.0") identifies the laboratory reporting limit (RL) or practical quantitation limit (PQL).

ENSOLUM

APPENDIX G

Laboratory Data Sheets & Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 08, 2021

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

RE: Crawford GCB #1E OrderNo.: 2102204

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/4/2021 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2102204**
Date Reported: **2/8/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-1
Project: Crawford GCB #1E **Collection Date:** 2/3/2021 4:30:00 PM
Lab ID: 2102204-001 **Matrix:** MEOH (SOIL) **Received Date:** 2/4/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**VP**
Chloride	140	60		mg/Kg	20	2/4/2021 10:09:33 AM	57911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**mb**
Diesel Range Organics (DRO)	1000	480		mg/Kg	50	2/4/2021 11:11:34 AM	57910
Motor Oil Range Organics (MRO)	14000	2400		mg/Kg	50	2/4/2021 11:11:34 AM	57910
Surr: DNOP	0	70-130	S	%Rec	50	2/4/2021 11:11:34 AM	57910
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	1500	65		mg/Kg	20	2/4/2021 12:14:19 PM	G75077
Surr: BFB	304	75.3-105	S	%Rec	20	2/4/2021 12:14:19 PM	G75077
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	1.6	0.016		mg/Kg	1	2/4/2021 9:30:22 AM	B75077
Toluene	18	0.65		mg/Kg	20	2/4/2021 12:14:19 PM	B75077
Ethylbenzene	5.0	0.65		mg/Kg	20	2/4/2021 12:14:19 PM	B75077
Xylenes, Total	44	1.3		mg/Kg	20	2/4/2021 12:14:19 PM	B75077
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	20	2/4/2021 12:14:19 PM	B75077

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

Qualifiers:

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

Analytical Report
Lab Order **2102204**
Date Reported: **2/8/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-2
Project: Crawford GCB #1E **Collection Date:** 2/3/2021 4:35:00 PM
Lab ID: 2102204-002 **Matrix:** MEOH (SOIL) **Received Date:** 2/4/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/4/2021 10:21:57 AM	57911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	13	9.9		mg/Kg	1	2/4/2021 11:59:52 AM	57910
Motor Oil Range Organics (MRO)	170	50		mg/Kg	1	2/4/2021 11:59:52 AM	57910
Surr: DNOP	112	70-130		%Rec	1	2/4/2021 11:59:52 AM	57910
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	13	4.1		mg/Kg	1	2/4/2021 12:37:41 PM	G75077
Surr: BFB	149	75.3-105	S	%Rec	1	2/4/2021 12:37:41 PM	G75077
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.029	0.021		mg/Kg	1	2/4/2021 12:37:41 PM	B75077
Toluene	0.052	0.041		mg/Kg	1	2/4/2021 12:37:41 PM	B75077
Ethylbenzene	0.046	0.041		mg/Kg	1	2/4/2021 12:37:41 PM	B75077
Xylenes, Total	0.41	0.082		mg/Kg	1	2/4/2021 12:37:41 PM	B75077
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	2/4/2021 12:37:41 PM	B75077

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

Qualifiers:

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

Analytical Report
Lab Order **2102204**
Date Reported: **2/8/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-3
Project: Crawford GCB #1E **Collection Date:** 2/3/2021 4:40:00 PM
Lab ID: 2102204-003 **Matrix:** MEOH (SOIL) **Received Date:** 2/4/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/4/2021 10:34:21 AM	57911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	2/4/2021 12:47:37 PM	57910
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/4/2021 12:47:37 PM	57910
Surr: DNOP	104	70-130		%Rec	1	2/4/2021 12:47:37 PM	57910
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	2/4/2021 1:01:08 PM	G75077
Surr: BFB	111	75.3-105	S	%Rec	1	2/4/2021 1:01:08 PM	G75077
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.020		mg/Kg	1	2/4/2021 1:01:08 PM	B75077
Toluene	ND	0.040		mg/Kg	1	2/4/2021 1:01:08 PM	B75077
Ethylbenzene	ND	0.040		mg/Kg	1	2/4/2021 1:01:08 PM	B75077
Xylenes, Total	0.13	0.080		mg/Kg	1	2/4/2021 1:01:08 PM	B75077
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	2/4/2021 1:01:08 PM	B75077

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

Qualifiers:

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

Analytical Report
Lab Order **2102204**
Date Reported: **2/8/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-4
Project: Crawford GCB #1E **Collection Date:** 2/3/2021 4:45:00 PM
Lab ID: 2102204-004 **Matrix:** MEOH (SOIL) **Received Date:** 2/4/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/4/2021 10:46:46 AM	57911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/4/2021 1:11:27 PM	57910
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/4/2021 1:11:27 PM	57910
Surr: DNOP	110	70-130		%Rec	1	2/4/2021 1:11:27 PM	57910
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	2/4/2021 10:40:52 AM	G75077
Surr: BFB	106	75.3-105	S	%Rec	1	2/4/2021 10:40:52 AM	G75077
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.015		mg/Kg	1	2/4/2021 10:40:52 AM	B75077
Toluene	ND	0.030		mg/Kg	1	2/4/2021 10:40:52 AM	B75077
Ethylbenzene	ND	0.030		mg/Kg	1	2/4/2021 10:40:52 AM	B75077
Xylenes, Total	ND	0.059		mg/Kg	1	2/4/2021 10:40:52 AM	B75077
Surr: 4-Bromofluorobenzene	99.7	80-120		%Rec	1	2/4/2021 10:40:52 AM	B75077

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

Qualifiers:

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

Analytical Report
Lab Order **2102204**
Date Reported: **2/8/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-5
Project: Crawford GCB #1E **Collection Date:** 2/3/2021 4:50:00 PM
Lab ID: 2102204-005 **Matrix:** MEOH (SOIL) **Received Date:** 2/4/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/4/2021 10:59:10 AM	57911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	11	10		mg/Kg	1	2/4/2021 12:49:29 PM	57910
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/4/2021 12:49:29 PM	57910
Surr: DNOP	94.3	70-130		%Rec	1	2/4/2021 12:49:29 PM	57910
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	2/4/2021 11:04:18 AM	G75077
Surr: BFB	111	75.3-105	S	%Rec	1	2/4/2021 11:04:18 AM	G75077
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.020	0.018		mg/Kg	1	2/4/2021 11:04:18 AM	B75077
Toluene	0.045	0.036		mg/Kg	1	2/4/2021 11:04:18 AM	B75077
Ethylbenzene	ND	0.036		mg/Kg	1	2/4/2021 11:04:18 AM	B75077
Xylenes, Total	0.10	0.073		mg/Kg	1	2/4/2021 11:04:18 AM	B75077
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	2/4/2021 11:04:18 AM	B75077

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102204**
08-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **MB-57911** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **57911** RunNo: **75086**
Prep Date: **2/4/2021** Analysis Date: **2/4/2021** SeqNo: **2650452** Units: **mg/Kg**

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

Sample ID: **LCS-57911** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **57911** RunNo: **75086**
Prep Date: **2/4/2021** Analysis Date: **2/4/2021** SeqNo: **2650453** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102204**

08-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **MB-57853**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **57853**	RunNo: **75034**							
Prep Date: **2/2/2021**	Analysis Date: **2/3/2021**	SeqNo: **2649194**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.5		10.00		84.5	70	130			

Sample ID: **LCS-57853**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **57853**	RunNo: **75034**							
Prep Date: **2/2/2021**	Analysis Date: **2/3/2021**	SeqNo: **2649195**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		81.3	70	130			

Sample ID: **MB-57860**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **57860**	RunNo: **75034**							
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2649218**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		92.9	70	130			

Sample ID: **LCS-57860**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **57860**	RunNo: **75034**							
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2649219**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.0	70	130			

Sample ID: **MB-57873**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **57873**	RunNo: **75056**							
Prep Date: **2/3/2021**	Analysis Date: **2/4/2021**	SeqNo: **2649463**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		114	70	130			

Sample ID: **MB-57910**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **57910**	RunNo: **75056**							
Prep Date: **2/4/2021**	Analysis Date: **2/4/2021**	SeqNo: **2649464**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		105	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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#: **2102204**

08-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **LCS-57873** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **57873** RunNo: **75056**

Prep Date: **2/3/2021** Analysis Date: **2/4/2021** SeqNo: **2649465** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		106	70	130			

Sample ID: **LCS-57910** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **57910** RunNo: **75056**

Prep Date: **2/4/2021** Analysis Date: **2/4/2021** SeqNo: **2649963** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	68.9	141			
Surr: DNOP	5.0		5.000		99.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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#: **2102204**
08-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **G75077** RunNo: **75077**
Prep Date: Analysis Date: **2/4/2021** SeqNo: **2650151** 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		105	75.3	105			

Sample ID: **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **G75077** RunNo: **75077**
Prep Date: Analysis Date: **2/4/2021** SeqNo: **2650152** 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	109	80	120			
Surr: BFB	1200		1000		117	75.3	105			S

Sample ID: **2102204-002ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-2** Batch ID: **G75077** RunNo: **75077**
Prep Date: Analysis Date: **2/4/2021** SeqNo: **2650623** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	41	5.0	25.00	13.64	109	61.3	114			
Surr: BFB	1600		1000		162	75.3	105			S

Sample ID: **2102204-002amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-2** Batch ID: **G75077** RunNo: **75077**
Prep Date: Analysis Date: **2/4/2021** SeqNo: **2650624** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	39	5.0	25.00	13.64	103	61.3	114	3.69	20	
Surr: BFB	1600		1000		159	75.3	105	0	0	S

Sample ID: **lcs-57856** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **57856** RunNo: **75077**
Prep Date: **2/2/2021** Analysis Date: **2/4/2021** SeqNo: **2650627** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1200		1000		117	75.3	105			S

Sample ID: **mb-57856** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **57856** RunNo: **75077**
Prep Date: **2/2/2021** Analysis Date: **2/4/2021** SeqNo: **2650628** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		103	75.3	105			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102204**

08-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B75077**	RunNo: **75077**
Prep Date:	Analysis Date: **2/4/2021**	SeqNo: **2650166** 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		100	80	120			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B75077**	RunNo: **75077**
Prep Date:	Analysis Date: **2/4/2021**	SeqNo: **2650169** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.4	80	120			
Toluene	0.96	0.050	1.000	0	96.0	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.7	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID: **LCS-57856**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **57856**	RunNo: **75077**
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2650691** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: **mb-57856**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **57856**	RunNo: **75077**
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2650692** Units: **%Rec**

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

Sample ID: **2102204-003ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-3**	Batch ID: **B75077**	RunNo: **75077**
Prep Date:	Analysis Date: **2/4/2021**	SeqNo: **2650693** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0.01959	93.3	76.3	120			
Toluene	1.0	0.050	1.000	0.03885	97.9	78.5	120			
Ethylbenzene	0.97	0.050	1.000	0.01815	95.5	78.1	124			
Xylenes, Total	3.0	0.10	3.000	0.1324	96.6	79.3	125			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102204**
08-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **2102204-003ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-3** Batch ID: **B75077** RunNo: **75077**
Prep Date: Analysis Date: **2/4/2021** SeqNo: **2650693** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID: **2102204-003amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-3** Batch ID: **B75077** RunNo: **75077**
Prep Date: Analysis Date: **2/4/2021** SeqNo: **2650694** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0.01959	92.0	76.3	120	1.38	20	
Toluene	0.99	0.050	1.000	0.03885	95.6	78.5	120	2.29	20	
Ethylbenzene	0.96	0.050	1.000	0.01815	94.0	78.1	124	1.52	20	
Xylenes, Total	3.0	0.10	3.000	0.1324	94.9	79.3	125	1.66	20	
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **2102204** RcptNo: 1

Received By: **Juan Rojas** **2/4/2021 8:00:00 AM**

Completed By: **Cheyenne Cason** **2/4/2021 8:05:30 AM**

Reviewed By: IO 2/4/21

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° 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: CM 2/4/21

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	0.8	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: SAME DAY
☐ Standard ☒ Rush 100%

Project Name: Crawford GCB #1E

Project #: see notes

Project Manager: KSummers

Sampler: RQuechilly
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 1.0-0.2=0.8 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2102204	BTEX / MTBE / TMBs (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
2/3/21	1630	S	S-1	1x 4oz Jar	cool	001	X	X									X
2/3/21	1635	S	S-2	1x 4oz Jar	cool	002	X	X									X
2/3/21	1640	S	S-3	1x 4oz Jar	cool	003	X	X									X
2/3/21	1645	S	S-4	1x 4oz Jar	cool	004	X	X									X
2/3/21	1650	S	S-5	1x 4oz Jar	cool	005	X	X									X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
2/3/21	1816				2/3/21	1816
2/3/21	1904			courier	2/4/21	8:00

Remarks: SAME DAY

PM - Tom Long (EPROD)
PayKey - RB21200
Num AFE - N52276

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 08, 2021

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

RE: Crawford GCB #1E OrderNo.: 2102205

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/4/2021 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2102205**
Date Reported: **2/8/2021**

CLIENT: ENSOLUM **Client Sample ID:** SP-1
Project: Crawford GCB #1E **Collection Date:** 2/3/2021 4:55:00 PM
Lab ID: 2102205-001 **Matrix:** MEOH (SOIL) **Received Date:** 2/4/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/4/2021 11:11:35 AM	57911
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	100	8.9		mg/Kg	1	2/4/2021 11:14:13 AM	57910
Motor Oil Range Organics (MRO)	840	44		mg/Kg	1	2/4/2021 11:14:13 AM	57910
Surr: DNOP	103	70-130		%Rec	1	2/4/2021 11:14:13 AM	57910
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	26	15		mg/Kg	5	2/4/2021 1:24:33 PM	G75077
Surr: BFB	118	75.3-105	S	%Rec	5	2/4/2021 1:24:33 PM	G75077
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.18	0.076		mg/Kg	5	2/4/2021 1:24:33 PM	B75077
Toluene	0.58	0.15		mg/Kg	5	2/4/2021 1:24:33 PM	B75077
Ethylbenzene	ND	0.15		mg/Kg	5	2/4/2021 1:24:33 PM	B75077
Xylenes, Total	0.73	0.30		mg/Kg	5	2/4/2021 1:24:33 PM	B75077
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	5	2/4/2021 1:24:33 PM	B75077

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102205**

08-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **MB-57911**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **57911**	RunNo: **75086**							
Prep Date: **2/4/2021**	Analysis Date: **2/4/2021**	SeqNo: **2650452**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-57911**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **57911**	RunNo: **75086**							
Prep Date: **2/4/2021**	Analysis Date: **2/4/2021**	SeqNo: **2650453**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102205**

08-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **MB-57853**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **57853**	RunNo: **75034**							
Prep Date: **2/2/2021**	Analysis Date: **2/3/2021**	SeqNo: **2649194**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.5		10.00		84.5	70	130			

Sample ID: **LCS-57853**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **57853**	RunNo: **75034**							
Prep Date: **2/2/2021**	Analysis Date: **2/3/2021**	SeqNo: **2649195**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		81.3	70	130			

Sample ID: **MB-57860**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **57860**	RunNo: **75034**							
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2649218**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		92.9	70	130			

Sample ID: **LCS-57860**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **57860**	RunNo: **75034**							
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2649219**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.0	70	130			

Sample ID: **MB-57873**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **57873**	RunNo: **75056**							
Prep Date: **2/3/2021**	Analysis Date: **2/4/2021**	SeqNo: **2649463**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		114	70	130			

Sample ID: **MB-57910**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **57910**	RunNo: **75056**							
Prep Date: **2/4/2021**	Analysis Date: **2/4/2021**	SeqNo: **2649464**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		105	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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#: **2102205**

08-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **LCS-57873** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **57873** RunNo: **75056**

Prep Date: **2/3/2021** Analysis Date: **2/4/2021** SeqNo: **2649465** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		106	70	130			

Sample ID: **LCS-57910** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **57910** RunNo: **75056**

Prep Date: **2/4/2021** Analysis Date: **2/4/2021** SeqNo: **2649963** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	68.9	141			
Surr: DNOP	5.0		5.000		99.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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#: **2102205**

08-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G75077**	RunNo: **75077**
Prep Date:	Analysis Date: **2/4/2021**	SeqNo: **2650151** 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		105	75.3	105			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G75077**	RunNo: **75077**
Prep Date:	Analysis Date: **2/4/2021**	SeqNo: **2650152** 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	109	80	120			
Surr: BFB	1200		1000		117	75.3	105			S

Sample ID: **lcs-57856**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **57856**	RunNo: **75077**
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2650627** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1200		1000		117	75.3	105			S

Sample ID: **mb-57856**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **57856**	RunNo: **75077**
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2650628** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		103	75.3	105			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102205**

08-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B75077**	RunNo: **75077**
Prep Date:	Analysis Date: **2/4/2021**	SeqNo: **2650166** 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		100	80	120			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B75077**	RunNo: **75077**
Prep Date:	Analysis Date: **2/4/2021**	SeqNo: **2650169** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.4	80	120			
Toluene	0.96	0.050	1.000	0	96.0	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.7	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID: **LCS-57856**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **57856**	RunNo: **75077**
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2650691** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: **mb-57856**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **57856**	RunNo: **75077**
Prep Date: **2/2/2021**	Analysis Date: **2/4/2021**	SeqNo: **2650692** Units: **%Rec**

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

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2102205** RcptNo: **1**

Received By: **Juan Rojas** **2/4/2021 8:00:00 AM**

Completed By: **Cheyenne Cason** **2/4/2021 8:12:18 AM**

Reviewed By: TO 2/4/21

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° 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: 2/4/21

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	0.8	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: SAME DAY
☐ Standard ☒ Rush 1004D

Project Name: Crawford GCB#1E

Project #: See notes

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 1.0-0.2=0.8 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2102205	BTEX / ~~MTBE~~ / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
2/3/21	1655	S	SP-1	1 x 4oz Jar	cool	cool	X	X									X

Analysis Request

Relinquished by:	Received by:	Via:	Date	Time
			2/3/21	1816
			2/4/21	8:00

Remarks: SAMEDAY
PM-Tom Long (EPROD)
Pay Key- RB21200
Non AFE- N52276

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 11, 2021

Kyle Summers

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

RE: Crawford G CB #1E OrderNo.: 2102430

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 2/9/2021 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2102430**
Date Reported: **2/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-6
Project: Crawford G CB #1E **Collection Date:** 2/8/2021 9:00:00 AM
Lab ID: 2102430-001 **Matrix:** MEOH (SOIL) **Received Date:** 2/9/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/9/2021 11:30:16 AM	57998
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	2/9/2021 12:18:54 PM	B75172
Surr: BFB	96.5	70-130		%Rec	1	2/9/2021 12:18:54 PM	B75172
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	2/9/2021 11:59:59 AM	57993
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/9/2021 11:59:59 AM	57993
Surr: DNOP	117	70-130		%Rec	1	2/9/2021 11:59:59 AM	57993
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.018		mg/Kg	1	2/9/2021 12:18:54 PM	A75172
Toluene	ND	0.035		mg/Kg	1	2/9/2021 12:18:54 PM	A75172
Ethylbenzene	ND	0.035		mg/Kg	1	2/9/2021 12:18:54 PM	A75172
Xylenes, Total	ND	0.070		mg/Kg	1	2/9/2021 12:18:54 PM	A75172
Surr: 1,2-Dichloroethane-d4	77.9	70-130		%Rec	1	2/9/2021 12:18:54 PM	A75172
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	2/9/2021 12:18:54 PM	A75172
Surr: Dibromofluoromethane	101	70-130		%Rec	1	2/9/2021 12:18:54 PM	A75172
Surr: Toluene-d8	99.1	70-130		%Rec	1	2/9/2021 12:18:54 PM	A75172

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

Qualifiers:

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

Analytical Report
Lab Order **2102430**
Date Reported: **2/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-7
Project: Crawford G CB #1E **Collection Date:** 2/8/2021 9:05:00 AM
Lab ID: 2102430-002 **Matrix:** MEOH (SOIL) **Received Date:** 2/9/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	61		mg/Kg	20	2/9/2021 11:42:41 AM	57998
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	2/9/2021 12:47:25 PM	B75172
Surr: BFB	99.2	70-130		%Rec	1	2/9/2021 12:47:25 PM	B75172
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/9/2021 12:09:47 PM	57993
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/9/2021 12:09:47 PM	57993
Surr: DNOP	111	70-130		%Rec	1	2/9/2021 12:09:47 PM	57993
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.021		mg/Kg	1	2/9/2021 12:47:25 PM	A75172
Toluene	ND	0.042		mg/Kg	1	2/9/2021 12:47:25 PM	A75172
Ethylbenzene	ND	0.042		mg/Kg	1	2/9/2021 12:47:25 PM	A75172
Xylenes, Total	ND	0.084		mg/Kg	1	2/9/2021 12:47:25 PM	A75172
Surr: 1,2-Dichloroethane-d4	79.3	70-130		%Rec	1	2/9/2021 12:47:25 PM	A75172
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	2/9/2021 12:47:25 PM	A75172
Surr: Dibromofluoromethane	98.0	70-130		%Rec	1	2/9/2021 12:47:25 PM	A75172
Surr: Toluene-d8	100	70-130		%Rec	1	2/9/2021 12:47:25 PM	A75172

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2102430**
Date Reported: **2/11/2021**

CLIENT: ENSOLUM **Client Sample ID:** S-8
Project: Crawford G CB #1E **Collection Date:** 2/8/2021 9:10:00 AM
Lab ID: 2102430-003 **Matrix:** MEOH (SOIL) **Received Date:** 2/9/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/9/2021 11:55:05 AM	57998
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	2/9/2021 1:16:04 PM	B75172
Surr: BFB	96.8	70-130		%Rec	1	2/9/2021 1:16:04 PM	B75172
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	18	9.7		mg/Kg	1	2/9/2021 12:19:37 PM	57993
Motor Oil Range Organics (MRO)	65	48		mg/Kg	1	2/9/2021 12:19:37 PM	57993
Surr: DNOP	120	70-130		%Rec	1	2/9/2021 12:19:37 PM	57993
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.017		mg/Kg	1	2/9/2021 1:16:04 PM	A75172
Toluene	ND	0.035		mg/Kg	1	2/9/2021 1:16:04 PM	A75172
Ethylbenzene	ND	0.035		mg/Kg	1	2/9/2021 1:16:04 PM	A75172
Xylenes, Total	ND	0.069		mg/Kg	1	2/9/2021 1:16:04 PM	A75172
Surr: 1,2-Dichloroethane-d4	76.9	70-130		%Rec	1	2/9/2021 1:16:04 PM	A75172
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	2/9/2021 1:16:04 PM	A75172
Surr: Dibromofluoromethane	101	70-130		%Rec	1	2/9/2021 1:16:04 PM	A75172
Surr: Toluene-d8	97.9	70-130		%Rec	1	2/9/2021 1:16:04 PM	A75172

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

Qualifiers:

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

Analytical Report
Lab Order **2102430**
Date Reported: **2/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-2
Project: Crawford G CB #1E **Collection Date:** 2/8/2021 9:15:00 AM
Lab ID: 2102430-004 **Matrix:** MEOH (SOIL) **Received Date:** 2/9/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/9/2021 12:07:29 PM	57998
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	2/9/2021 1:44:48 PM	B75172
Surr: BFB	94.6	70-130		%Rec	1	2/9/2021 1:44:48 PM	B75172
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	2/9/2021 12:29:38 PM	57993
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/9/2021 12:29:38 PM	57993
Surr: DNOP	110	70-130		%Rec	1	2/9/2021 12:29:38 PM	57993
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.019		mg/Kg	1	2/9/2021 1:44:48 PM	A75172
Toluene	0.075	0.039		mg/Kg	1	2/9/2021 1:44:48 PM	A75172
Ethylbenzene	ND	0.039		mg/Kg	1	2/9/2021 1:44:48 PM	A75172
Xylenes, Total	0.15	0.077		mg/Kg	1	2/9/2021 1:44:48 PM	A75172
Surr: 1,2-Dichloroethane-d4	84.1	70-130		%Rec	1	2/9/2021 1:44:48 PM	A75172
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	2/9/2021 1:44:48 PM	A75172
Surr: Dibromofluoromethane	98.2	70-130		%Rec	1	2/9/2021 1:44:48 PM	A75172
Surr: Toluene-d8	88.4	70-130		%Rec	1	2/9/2021 1:44:48 PM	A75172

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

Qualifiers:

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

Analytical Report
Lab Order **2102430**
Date Reported: **2/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-3
Project: Crawford G CB #1E **Collection Date:** 2/8/2021 9:20:00 AM
Lab ID: 2102430-005 **Matrix:** MEOH (SOIL) **Received Date:** 2/9/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/9/2021 12:19:53 PM	57998
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	2/9/2021 2:13:30 PM	B75172
Surr: BFB	96.2	70-130		%Rec	1	2/9/2021 2:13:30 PM	B75172
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/9/2021 12:39:40 PM	57993
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/9/2021 12:39:40 PM	57993
Surr: DNOP	118	70-130		%Rec	1	2/9/2021 12:39:40 PM	57993
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.017		mg/Kg	1	2/9/2021 2:13:30 PM	A75172
Toluene	ND	0.033		mg/Kg	1	2/9/2021 2:13:30 PM	A75172
Ethylbenzene	ND	0.033		mg/Kg	1	2/9/2021 2:13:30 PM	A75172
Xylenes, Total	ND	0.067		mg/Kg	1	2/9/2021 2:13:30 PM	A75172
Surr: 1,2-Dichloroethane-d4	80.8	70-130		%Rec	1	2/9/2021 2:13:30 PM	A75172
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	2/9/2021 2:13:30 PM	A75172
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	2/9/2021 2:13:30 PM	A75172
Surr: Toluene-d8	91.8	70-130		%Rec	1	2/9/2021 2:13:30 PM	A75172

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

Qualifiers:

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

Analytical Report
Lab Order **2102430**
Date Reported: **2/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-4
Project: Crawford G CB #1E **Collection Date:** 2/8/2021 9:25:00 AM
Lab ID: 2102430-006 **Matrix:** MEOH (SOIL) **Received Date:** 2/9/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	59		mg/Kg	20	2/9/2021 12:32:18 PM	57998
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	2/9/2021 2:42:15 PM	B75172
Surr: BFB	95.5	70-130		%Rec	1	2/9/2021 2:42:15 PM	B75172
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/9/2021 12:49:42 PM	57993
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/9/2021 12:49:42 PM	57993
Surr: DNOP	113	70-130		%Rec	1	2/9/2021 12:49:42 PM	57993
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.019		mg/Kg	1	2/9/2021 2:42:15 PM	A75172
Toluene	ND	0.039		mg/Kg	1	2/9/2021 2:42:15 PM	A75172
Ethylbenzene	ND	0.039		mg/Kg	1	2/9/2021 2:42:15 PM	A75172
Xylenes, Total	ND	0.077		mg/Kg	1	2/9/2021 2:42:15 PM	A75172
Surr: 1,2-Dichloroethane-d4	77.6	70-130		%Rec	1	2/9/2021 2:42:15 PM	A75172
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	2/9/2021 2:42:15 PM	A75172
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	2/9/2021 2:42:15 PM	A75172
Surr: Toluene-d8	96.2	70-130		%Rec	1	2/9/2021 2:42:15 PM	A75172

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

Qualifiers:

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

Analytical Report
Lab Order **2102430**
Date Reported: **2/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-5
Project: Crawford G CB #1E **Collection Date:** 2/8/2021 9:30:00 AM
Lab ID: 2102430-007 **Matrix:** MEOH (SOIL) **Received Date:** 2/9/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/9/2021 12:44:42 PM	57998
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	2/9/2021 3:10:48 PM	B75172
Surr: BFB	96.9	70-130		%Rec	1	2/9/2021 3:10:48 PM	B75172
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	2/9/2021 12:59:46 PM	57993
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	2/9/2021 12:59:46 PM	57993
Surr: DNOP	111	70-130		%Rec	1	2/9/2021 12:59:46 PM	57993
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.021		mg/Kg	1	2/9/2021 3:10:48 PM	A75172
Toluene	ND	0.042		mg/Kg	1	2/9/2021 3:10:48 PM	A75172
Ethylbenzene	ND	0.042		mg/Kg	1	2/9/2021 3:10:48 PM	A75172
Xylenes, Total	ND	0.084		mg/Kg	1	2/9/2021 3:10:48 PM	A75172
Surr: 1,2-Dichloroethane-d4	80.9	70-130		%Rec	1	2/9/2021 3:10:48 PM	A75172
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	2/9/2021 3:10:48 PM	A75172
Surr: Dibromofluoromethane	94.6	70-130		%Rec	1	2/9/2021 3:10:48 PM	A75172
Surr: Toluene-d8	92.2	70-130		%Rec	1	2/9/2021 3:10:48 PM	A75172

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

Qualifiers:

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

Analytical Report
Lab Order **2102430**
Date Reported: **2/11/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-6
Project: Crawford G CB #1E **Collection Date:** 2/8/2021 9:35:00 AM
Lab ID: 2102430-008 **Matrix:** MEOH (SOIL) **Received Date:** 2/9/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	2/9/2021 12:57:08 PM	57998
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	2/9/2021 3:39:17 PM	B75172
Surr: BFB	94.9	70-130		%Rec	1	2/9/2021 3:39:17 PM	B75172
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/9/2021 1:09:48 PM	57993
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/9/2021 1:09:48 PM	57993
Surr: DNOP	115	70-130		%Rec	1	2/9/2021 1:09:48 PM	57993
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.020		mg/Kg	1	2/9/2021 3:39:17 PM	A75172
Toluene	ND	0.041		mg/Kg	1	2/9/2021 3:39:17 PM	A75172
Ethylbenzene	ND	0.041		mg/Kg	1	2/9/2021 3:39:17 PM	A75172
Xylenes, Total	ND	0.081		mg/Kg	1	2/9/2021 3:39:17 PM	A75172
Surr: 1,2-Dichloroethane-d4	80.8	70-130		%Rec	1	2/9/2021 3:39:17 PM	A75172
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	2/9/2021 3:39:17 PM	A75172
Surr: Dibromofluoromethane	95.7	70-130		%Rec	1	2/9/2021 3:39:17 PM	A75172
Surr: Toluene-d8	95.0	70-130		%Rec	1	2/9/2021 3:39:17 PM	A75172

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102430**
11-Feb-21

Client: ENSOLUM
Project: Crawford G CB #1E

Sample ID: **MB-57998**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **57998**	RunNo: **75158**							
Prep Date: **2/9/2021**	Analysis Date: **2/9/2021**	SeqNo: **2654773**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-57998**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **57998**	RunNo: **75158**							
Prep Date: **2/9/2021**	Analysis Date: **2/9/2021**	SeqNo: **2654774**	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102430**

11-Feb-21

Client: ENSOLUM

Project: Crawford G CB #1E

Sample ID: **MB-57993** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **57993** RunNo: **75160**

Prep Date: **2/9/2021** Analysis Date: **2/9/2021** SeqNo: **2653623** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		101	70	130			

Sample ID: **LCS-57993** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **57993** RunNo: **75160**

Prep Date: **2/9/2021** Analysis Date: **2/9/2021** SeqNo: **2653625** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	68.9	141			
Surr: DNOP	5.0		5.000		99.4	70	130			

Sample ID: **2102430-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-6** Batch ID: **57993** RunNo: **75160**

Prep Date: **2/9/2021** Analysis Date: **2/9/2021** SeqNo: **2653809** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.1	45.70	3.852	87.4	15	184			
Surr: DNOP	4.5		4.570		99.0	70	130			

Sample ID: **2102430-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-6** Batch ID: **57993** RunNo: **75160**

Prep Date: **2/9/2021** Analysis Date: **2/9/2021** SeqNo: **2654918** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.8	48.78	3.852	95.5	15	184	14.1	23.9	
Surr: DNOP	5.2		4.878		106	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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#: **2102430**
11-Feb-21

Client: ENSOLUM
Project: Crawford G CB #1E

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS** Batch ID: **A75172** RunNo: **75172**
Prep Date: Analysis Date: **2/9/2021** SeqNo: **2654164** 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	94.3	70	130			
Toluene	0.98	0.050	1.000	0	97.8	70	130			
Surr: 1,2-Dichloroethane-d4	0.39		0.5000		77.8	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.2	70	130			
Surr: Dibromofluoromethane	0.44		0.5000		87.7	70	130			
Surr: Toluene-d8	0.46		0.5000		91.6	70	130			

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **A75172** RunNo: **75172**
Prep Date: Analysis Date: **2/9/2021** SeqNo: **2654165** 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: 1,2-Dichloroethane-d4	0.37		0.5000		74.7	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.3	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.4	70	130			
Surr: Toluene-d8	0.50		0.5000		99.9	70	130			

Sample ID: **2102430-003ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-8** Batch ID: **A75172** RunNo: **75172**
Prep Date: Analysis Date: **2/9/2021** SeqNo: **2654839** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.69	0.017	0.6940	0	98.7	67.9	137			
Toluene	0.66	0.035	0.6940	0	94.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.28		0.3470		79.9	70	130			
Surr: 4-Bromofluorobenzene	0.32		0.3470		93.2	70	130			
Surr: Dibromofluoromethane	0.32		0.3470		90.9	70	130			
Surr: Toluene-d8	0.33		0.3470		94.6	70	130			

Sample ID: **2102430-003amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-8** Batch ID: **A75172** RunNo: **75172**
Prep Date: Analysis Date: **2/9/2021** SeqNo: **2654840** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.64	0.017	0.6940	0	92.6	67.9	137	6.40	20	
Toluene	0.61	0.035	0.6940	0	88.0	70	130	7.34	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102430**
11-Feb-21

Client: ENSOLUM
Project: Crawford G CB #1E

Sample ID: **2102430-003amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-8** Batch ID: **A75172** RunNo: **75172**
Prep Date: Analysis Date: **2/9/2021** SeqNo: **2654840** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.31		0.3470		88.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.33		0.3470		96.1	70	130	0	0	
Surr: Dibromofluoromethane	0.32		0.3470		91.2	70	130	0	0	
Surr: Toluene-d8	0.31		0.3470		88.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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#: **2102430**

11-Feb-21

Client: ENSOLUM

Project: Crawford G CB #1E

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

Client ID: **LCSS** Batch ID: **B75172** RunNo: **75172**

Prep Date: Analysis Date: **2/9/2021** SeqNo: **2654176** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.4	70	130			
Surr: BFB	480		500.0		96.0	70	130			

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **PBS** Batch ID: **B75172** RunNo: **75172**

Prep Date: Analysis Date: **2/9/2021** SeqNo: **2654177** 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	470		500.0		93.6	70	130			

Sample ID: **2102430-001ams** SampType: **MS** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **S-6** Batch ID: **B75172** RunNo: **75172**

Prep Date: Analysis Date: **2/9/2021** SeqNo: **2654861** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	3.5	17.56	0	83.0	49.2	122			
Surr: BFB	330		351.1		93.1	70	130			

Sample ID: **2102430-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D Mod: Gasoline Range**

Client ID: **S-6** Batch ID: **B75172** RunNo: **75172**

Prep Date: Analysis Date: **2/9/2021** SeqNo: **2654862** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	3.5	17.56	0	80.6	49.2	122	2.88	20	
Surr: BFB	330		351.1		92.6	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2102430** RcptNo: **1**

Received By: **Desiree Dominguez** **2/9/2021 7:50:00 AM** DD3

Completed By: **Cheyenne Cason** **2/9/2021 8:04:41 AM**

Reviewed By: IO 02/09/21

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° 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: DAD 2/9/21

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	4.1	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC.

Mailing Address: 606 S Rio Grande Suit A 87410

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 100% Same Day
☐ Standard ☒ Rush 2-9-21

Project Name: Crawford G CB #1E

Project #: 05A1226

Project Manager: K Summers

Sampler: C DAponti

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.9+0.2=4.1 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

1 of 2

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2102430	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
2/8	900	S	S-6	1 4oz Jar	Cool	001	X	X					X			
2/8	905	S	S-7	"	Cool	002	X	X					X			
2/8	910	S	S-8	"	Cool	003	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
2/8/21	1234				2/8/21	1234
2/8/21	1803			courier	2/9/21	7:50

Remarks: PM - Tom Long
Ray Key - RB 21200
AFE #N5226
Same Day

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

Chain-of-Custody Record

Client: Ensolum, LLC.

Mailing Address: 606 S Rio Grande Suit A 87410

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 100% Same Day
☐ Standard ☑ Rush 2-9-21

Project Name: Crawford G CB #1E

Project #:

Project Manager: K Summers

Sampler: A DAponti

On Ice: ☐ Yes ☐ No

# of Coolers:

Cooler Temp(including CF): (°C)

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

2 of 2

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2102430	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
2/8	915	S	SP-2	1 4oz Jar	Cool	004	X	X					X			
2/8	920	S	SP-3	"	Cool	005	X	X					X			
2/8	925	S	SP-4	"	Cool	006	X	X					X			
2/8	930	S	SP-5	"	Cool	007	X	X					X			
2/8	935	S	SP-6	"	Cool	008	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
2/8	1237				2/8/21	1234
2/8/21	1803			Courier	2/9/21	7:50

Remarks: PM Tom Long
Pay Key RB29200
AFE # N52276

Same Day

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 16, 2021

Kyle Summers

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

RE: Crawford 6C B 1E OrderNo.: 2102696

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/13/2021 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2102696**
Date Reported: **2/16/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: GW-1
Project: Crawford 6C B 1E
Collection Date: 2/12/2021 9:00:00 AM
Lab ID: 2102696-001 **Matrix:** AQUEOUS **Received Date:** 2/13/2021 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	2/15/2021 12:52:42 PM	C75306
Toluene	2.6	1.0		µg/L	1	2/15/2021 12:52:42 PM	C75306
Ethylbenzene	ND	1.0		µg/L	1	2/15/2021 12:52:42 PM	C75306
Xylenes, Total	6.8	1.5		µg/L	1	2/15/2021 12:52:42 PM	C75306
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	2/15/2021 12:52:42 PM	C75306
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	2/15/2021 12:52:42 PM	C75306
Surr: Dibromofluoromethane	108	70-130		%Rec	1	2/15/2021 12:52:42 PM	C75306
Surr: Toluene-d8	101	70-130		%Rec	1	2/15/2021 12:52:42 PM	C75306

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102696**

16-Feb-21

Client: ENSOLUM

Project: Crawford 6C B 1E

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**

Client ID: **LCSW** Batch ID: **C75306** RunNo: **75306**

Prep Date: Analysis Date: **2/15/2021** SeqNo: **2661336** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	20	1.0	20.00	0	98.1	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**

Client ID: **PBW** Batch ID: **C75306** RunNo: **75306**

Prep Date: Analysis Date: **2/15/2021** SeqNo: **2661337** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: **2102696-001a ms** SampType: **MS** TestCode: **EPA Method 8260: Volatiles Short List**

Client ID: **GW-1** Batch ID: **C75306** RunNo: **75306**

Prep Date: Analysis Date: **2/15/2021** SeqNo: **2661338** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0.4710	102	70	130			
Toluene	21	1.0	20.00	2.624	94.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.4		10.00		93.8	70	130			

Sample ID: **2102696-001a msd** SampType: **MSD** TestCode: **EPA Method 8260: Volatiles Short List**

Client ID: **GW-1** Batch ID: **C75306** RunNo: **75306**

Prep Date: Analysis Date: **2/15/2021** SeqNo: **2661339** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0.4710	102	70	130	0.259	20	
Toluene	21	1.0	20.00	2.624	93.8	70	130	0.480	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102696**
16-Feb-21

Client: ENSOLUM
Project: Crawford 6C B 1E

Sample ID: **2102696-001a msd** SampType: **MSD** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **GW-1** Batch ID: **C75306** RunNo: **75306**
Prep Date: Analysis Date: **2/15/2021** SeqNo: **2661339** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		109	70	130	0	0	
Surr: Toluene-d8	9.7		10.00		96.6	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2102696** RcptNo: 1

Received By: **Isaiah Ortiz** **2/13/2021 9:40:00 AM** I-OL

Completed By: **Isaiah Ortiz** **2/13/2021 10:01:41 AM** I-OL

Reviewed By: GM 02/13/2021

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preserved 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 ☑ JO

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: 2/13/21 (<2 or >12 unless noted)

Adjusted?

Checked by:

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	1.4	Good	Not Present			

Chain-of-Custody Record

Client: Ensolum, LLC.

Mailing Address: 606 S Rio Grande Suite A 87410

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 100% Same Day
☐ Standard ☒ Rush 2-15-21

Project Name: Crawford GC B #1E

Project #: 05A1226137

Project Manager: K Summers

Sampler: CD'Aponti

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.4°C-0 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2102696	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
2/12	9:00	W	GW-1	3 V	HgCl2	001	X									

Date	Time	Relinquished by:	Received by:	Via	Date	Time
2/12/21	1107			VIA	2/12/21	1107
2/12/21	1904				2/13/21	0946

Remarks: PM-Tom Long
PayKey # AB21200
AFE # NS2276
Same Day

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 26, 2021

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

RE: Crawford GCB #1E OrderNo.: 2102967

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/23/2021 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2102967**
Date Reported: **2/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** TW-1
Project: Crawford GCB #1E **Collection Date:** 2/22/2021 10:20:00 AM
Lab ID: 2102967-001 **Matrix:** AQUEOUS **Received Date:** 2/23/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JMT**
Fluoride	ND	0.50		mg/L	5	2/23/2021 10:13:17 AM	R75491
Chloride	2.8	2.5		mg/L	5	2/23/2021 10:13:17 AM	R75491
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	2/23/2021 10:13:17 AM	R75491
Bromide	ND	0.50		mg/L	5	2/23/2021 10:13:17 AM	R75491
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	2/23/2021 10:13:17 AM	R75491
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	2/23/2021 10:13:17 AM	R75491
Sulfate	45	2.5		mg/L	5	2/23/2021 10:13:17 AM	R75491
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JRR**
Conductivity	420	10		µmhos/c	1	2/25/2021 11:44:46 AM	R75552
SM2320B: ALKALINITY						Analyst:	**JRR**
Bicarbonate (As CaCO3)	169.3	20.00		mg/L Ca	1	2/25/2021 11:44:46 AM	R75552
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	2/25/2021 11:44:46 AM	R75552
Total Alkalinity (as CaCO3)	169.3	20.00		mg/L Ca	1	2/25/2021 11:44:46 AM	R75552
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**MH**
Total Dissolved Solids	290	40.0	D	mg/L	1	2/24/2021 3:14:00 PM	58287
SM4500-H+B / 9040C: PH						Analyst:	**JRR**
pH	7.78		H	pH units	1	2/25/2021 11:44:46 AM	R75552
EPA METHOD 200.7: METALS						Analyst:	**ELS**
Calcium	68	1.0		mg/L	1	2/24/2021 9:39:32 AM	58277
Magnesium	11	1.0		mg/L	1	2/24/2021 9:39:32 AM	58277
Potassium	2.4	1.0		mg/L	1	2/24/2021 9:39:32 AM	58277
Sodium	17	1.0		mg/L	1	2/24/2021 9:39:32 AM	58277
EPA METHOD 8260B: VOLATILES						Analyst:	**JMR**
Benzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Toluene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Ethylbenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Naphthalene	ND	2.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1-Methylnaphthalene	ND	4.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
2-Methylnaphthalene	ND	4.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Acetone	ND	10		µg/L	1	2/23/2021 5:38:55 PM	R75496
Bromobenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496

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

Qualifiers:

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

Analytical Report
Lab Order **2102967**
Date Reported: **2/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** TW-1
Project: Crawford GCB #1E **Collection Date:** 2/22/2021 10:20:00 AM
Lab ID: 2102967-001 **Matrix:** AQUEOUS **Received Date:** 2/23/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Bromodichloromethane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Bromoform	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Bromomethane	ND	3.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
2-Butanone	ND	10		µg/L	1	2/23/2021 5:38:55 PM	R75496
Carbon disulfide	ND	10		µg/L	1	2/23/2021 5:38:55 PM	R75496
Carbon Tetrachloride	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Chlorobenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Chloroethane	ND	2.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Chloroform	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Chloromethane	ND	3.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
2-Chlorotoluene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
4-Chlorotoluene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
cis-1,2-DCE	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Dibromochloromethane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Dibromomethane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,1-Dichloroethane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,1-Dichloroethene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,2-Dichloropropane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,3-Dichloropropane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
2,2-Dichloropropane	ND	2.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,1-Dichloropropene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Hexachlorobutadiene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
2-Hexanone	ND	10		µg/L	1	2/23/2021 5:38:55 PM	R75496
Isopropylbenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
4-Isopropyltoluene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
4-Methyl-2-pentanone	ND	10		µg/L	1	2/23/2021 5:38:55 PM	R75496
Methylene Chloride	ND	3.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
n-Butylbenzene	ND	3.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
n-Propylbenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
sec-Butylbenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Styrene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
tert-Butylbenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496

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

Qualifiers:

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

Analytical Report
Lab Order **2102967**
Date Reported: **2/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** TW-1
Project: Crawford GCB #1E **Collection Date:** 2/22/2021 10:20:00 AM
Lab ID: 2102967-001 **Matrix:** AQUEOUS **Received Date:** 2/23/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
trans-1,2-DCE	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Trichlorofluoromethane	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Vinyl chloride	ND	1.0		µg/L	1	2/23/2021 5:38:55 PM	R75496
Xylenes, Total	ND	1.5		µg/L	1	2/23/2021 5:38:55 PM	R75496
Surr: 1,2-Dichloroethane-d4	86.4	70-130		%Rec	1	2/23/2021 5:38:55 PM	R75496
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	2/23/2021 5:38:55 PM	R75496
Surr: Dibromofluoromethane	98.0	70-130		%Rec	1	2/23/2021 5:38:55 PM	R75496
Surr: Toluene-d8	102	70-130		%Rec	1	2/23/2021 5:38:55 PM	R75496

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

Qualifiers:

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

Analytical Report
Lab Order **2102967**
Date Reported: **2/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** TW-2
Project: Crawford GCB #1E **Collection Date:** 2/22/2021 10:50:00 AM
Lab ID: 2102967-002 **Matrix:** AQUEOUS **Received Date:** 2/23/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JMT**
Fluoride	ND	0.50		mg/L	5	2/23/2021 10:37:59 AM	R75491
Chloride	3.5	2.5		mg/L	5	2/23/2021 10:37:59 AM	R75491
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	2/23/2021 10:37:59 AM	R75491
Bromide	ND	0.50		mg/L	5	2/23/2021 10:37:59 AM	R75491
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	2/23/2021 10:37:59 AM	R75491
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	2/23/2021 10:37:59 AM	R75491
Sulfate	59	2.5		mg/L	5	2/23/2021 10:37:59 AM	R75491
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JRR**
Conductivity	470	10		µmhos/c	1	2/25/2021 12:04:44 PM	R75552
SM2320B: ALKALINITY						Analyst:	**JRR**
Bicarbonate (As CaCO3)	178.5	20.00		mg/L Ca	1	2/25/2021 12:04:44 PM	R75552
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	2/25/2021 12:04:44 PM	R75552
Total Alkalinity (as CaCO3)	178.5	20.00		mg/L Ca	1	2/25/2021 12:04:44 PM	R75552
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**MH**
Total Dissolved Solids	292	40.0	D	mg/L	1	2/24/2021 3:14:00 PM	58287
SM4500-H+B / 9040C: PH						Analyst:	**JRR**
pH	7.67		H	pH units	1	2/25/2021 12:04:44 PM	R75552
EPA METHOD 200.7: METALS						Analyst:	**ELS**
Calcium	92	1.0		mg/L	1	2/24/2021 9:42:31 AM	58277
Magnesium	14	1.0		mg/L	1	2/24/2021 9:42:31 AM	58277
Potassium	6.3	1.0		mg/L	1	2/24/2021 9:42:31 AM	58277
Sodium	20	1.0		mg/L	1	2/24/2021 9:42:31 AM	58277
EPA METHOD 8260B: VOLATILES						Analyst:	**JMR**
Benzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Toluene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Ethylbenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Naphthalene	ND	2.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1-Methylnaphthalene	ND	4.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
2-Methylnaphthalene	ND	4.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Acetone	ND	10		µg/L	1	2/23/2021 6:07:41 PM	R75496
Bromobenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496

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

Qualifiers:

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

Analytical Report
Lab Order **2102967**
Date Reported: **2/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** TW-2
Project: Crawford GCB #1E **Collection Date:** 2/22/2021 10:50:00 AM
Lab ID: 2102967-002 **Matrix:** AQUEOUS **Received Date:** 2/23/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Bromodichloromethane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Bromoform	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Bromomethane	ND	3.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
2-Butanone	ND	10		µg/L	1	2/23/2021 6:07:41 PM	R75496
Carbon disulfide	ND	10		µg/L	1	2/23/2021 6:07:41 PM	R75496
Carbon Tetrachloride	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Chlorobenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Chloroethane	ND	2.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Chloroform	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Chloromethane	ND	3.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
2-Chlorotoluene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
4-Chlorotoluene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
cis-1,2-DCE	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Dibromochloromethane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Dibromomethane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,1-Dichloroethane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,1-Dichloroethene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,2-Dichloropropane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,3-Dichloropropane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
2,2-Dichloropropane	ND	2.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,1-Dichloropropene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Hexachlorobutadiene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
2-Hexanone	ND	10		µg/L	1	2/23/2021 6:07:41 PM	R75496
Isopropylbenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
4-Isopropyltoluene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
4-Methyl-2-pentanone	ND	10		µg/L	1	2/23/2021 6:07:41 PM	R75496
Methylene Chloride	ND	3.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
n-Butylbenzene	ND	3.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
n-Propylbenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
sec-Butylbenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Styrene	1.1	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
tert-Butylbenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496

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

Qualifiers:

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

Analytical Report
Lab Order **2102967**
Date Reported: **2/26/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** TW-2
Project: Crawford GCB #1E **Collection Date:** 2/22/2021 10:50:00 AM
Lab ID: 2102967-002 **Matrix:** AQUEOUS **Received Date:** 2/23/2021 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
trans-1,2-DCE	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Trichlorofluoromethane	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Vinyl chloride	ND	1.0		µg/L	1	2/23/2021 6:07:41 PM	R75496
Xylenes, Total	ND	1.5		µg/L	1	2/23/2021 6:07:41 PM	R75496
Surr: 1,2-Dichloroethane-d4	91.2	70-130		%Rec	1	2/23/2021 6:07:41 PM	R75496
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	2/23/2021 6:07:41 PM	R75496
Surr: Dibromofluoromethane	96.2	70-130		%Rec	1	2/23/2021 6:07:41 PM	R75496
Surr: Toluene-d8	102	70-130		%Rec	1	2/23/2021 6:07:41 PM	R75496

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102967**

26-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **MB-58277** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **58277** RunNo: **75498**

Prep Date: **2/23/2021** Analysis Date: **2/24/2021** SeqNo: **2668198** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: **LLLCS-58277** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **58277** RunNo: **75498**

Prep Date: **2/23/2021** Analysis Date: **2/24/2021** SeqNo: **2668200** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	104	50	150			
Magnesium	ND	1.0	0.5000	0	102	50	150			
Potassium	ND	1.0	0.5000	0	98.2	50	150			
Sodium	ND	1.0	0.5000	0	106	50	150			

Sample ID: **LCS-58277** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **58277** RunNo: **75498**

Prep Date: **2/23/2021** Analysis Date: **2/24/2021** SeqNo: **2668202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	101	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Potassium	52	1.0	50.00	0	104	85	115			
Sodium	52	1.0	50.00	0	104	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102967**
26-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **MB-MH** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R75491** RunNo: **75491**
Prep Date: Analysis Date: **2/23/2021** SeqNo: **2667957** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R75491** RunNo: **75491**
Prep Date: Analysis Date: **2/23/2021** SeqNo: **2667958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.2	90	110			
Chloride	4.7	0.50	5.000	0	94.4	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.9	90	110			
Bromide	2.4	0.10	2.500	0	95.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.6	90	110			
Sulfate	9.7	0.50	10.00	0	97.2	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102967**
26-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R75496** RunNo: **75496**
Prep Date: Analysis Date: **2/23/2021** SeqNo: **2668162** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.7	70	130			
Toluene	19	1.0	20.00	0	96.5	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	89.6	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	78.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.8	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.5	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.7	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R75496** RunNo: **75496**
Prep Date: Analysis Date: **2/23/2021** SeqNo: **2668163** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102967**
26-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R75496** RunNo: **75496**
Prep Date: Analysis Date: **2/23/2021** SeqNo: **2668163** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102967**
26-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R75496** RunNo: **75496**
Prep Date: Analysis Date: **2/23/2021** SeqNo: **2668163** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.9	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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#: **2102967**
26-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **lcs-1 99.5uS eC**	SampType: **lcs**	TestCode: **SM2510B: Specific Conductance**							
Client ID: **LCSW**	Batch ID: **R75552**	RunNo: **75552**							
Prep Date:	Analysis Date: **2/25/2021**	SeqNo: **2670482**	Units: **µmhos/cm**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	99.50	0	102	85	115			

Sample ID: **2102967-001B Dup**	SampType: **dup**	TestCode: **SM2510B: Specific Conductance**							
Client ID: **TW-1**	Batch ID: **R75552**	RunNo: **75552**							
Prep Date:	Analysis Date: **2/25/2021**	SeqNo: **2670485**	Units: **µmhos/cm**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	420	10						0.214	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102967**
26-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **2102967-001B Dup** SampType: **dup** TestCode: **SM4500-H+B / 9040C: pH**
Client ID: **TW-1** Batch ID: **R75552** RunNo: **75552**
Prep Date: Analysis Date: **2/25/2021** SeqNo: **2670457** Units: **pH units**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.76							0.257		H

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102967**

26-Feb-21

Client: ENSOLUM

Project: Crawford GCB #1E

Sample ID: **mb-1 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R75552**	RunNo: **75552**							
Prep Date:	Analysis Date: **2/25/2021**	SeqNo: **2670404**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-1 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R75552**	RunNo: **75552**							
Prep Date:	Analysis Date: **2/25/2021**	SeqNo: **2670405**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	73.52	20.00	80.00	0	91.9	90	110			

Sample ID: **2102967-001B Dup**	SampType: **dup**	TestCode: **SM2320B: Alkalinity**							
Client ID: **TW-1**	Batch ID: **R75552**	RunNo: **75552**							
Prep Date:	Analysis Date: **2/25/2021**	SeqNo: **2670407**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	169.2	20.00						0.0945	20	

Sample ID: **MB-2 ALk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R75552**	RunNo: **75552**							
Prep Date:	Analysis Date: **2/25/2021**	SeqNo: **2670427**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **LCS-2 ALk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R75552**	RunNo: **75552**							
Prep Date:	Analysis Date: **2/25/2021**	SeqNo: **2670428**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	73.60	20.00	80.00	0	92.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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#: **2102967**
26-Feb-21

Client: ENSOLUM
Project: Crawford GCB #1E

Sample ID: **MB-58287**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**							
Client ID: **PBW**	Batch ID: **58287**	RunNo: **75511**							
Prep Date: **2/23/2021**	Analysis Date: **2/24/2021**	SeqNo: **2668560**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: **LCS-58287**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**							
Client ID: **LCSW**	Batch ID: **58287**	RunNo: **75511**							
Prep Date: **2/23/2021**	Analysis Date: **2/24/2021**	SeqNo: **2668561**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2102967** RcptNo: **1**

Received By: **Juan Rojas** **2/23/2021 7:35:00 AM**

Completed By: **Cheyenne Cason** **2/23/2021 8:01:47 AM**

Reviewed By: JR 2/23/21

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° 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: 4 (<2 or >12 unless noted)

Adjusted? NO

Checked by: SPA 2.23.21

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 6016 S. Bloomfield Suite A
Aztec, NM 87410

Phone #:

email or Fax#: KSummers@ensolum.com

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

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

Turn-Around Time: ASAP
~~☒ Standard~~ ☒ Rush

Project Name: Crawford GCB #1E

Project #: See notes

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☐ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 0.3+0.1=0.4 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2102967	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA) Full List	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Cation / Anion	TDS	pH			
2/22/21	1020	W	TW-1	various	various	001								X			X	X	X			
2/22/21	1050	W	TW-2	various	various	002								X			X	X	X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2/22/21	1344				2/22/21	1344
2/22/21	1816			courier	2/23/21	7:35

Remarks: ASAP

PM-Tom Long (EPROD)
Pay Key- RB21200
Nm AFE- N52276

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

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

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

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 46521
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	3/3/2022