



June 25, 2024

**New Mexico Energy Minerals and Natural Resources Department**

1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Deferral Request  
Goldenchild Battery  
Incident Number nAPP2400933895  
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document site assessment, excavation, and soil sampling activities at the Goldenchild Battery (Site). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of produced water. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Deferral Request*, describing site assessment, excavation, and delineation activities that have occurred and requesting deferral of final remediation for Incident Number nAPP2400933895 until the Site is reconstructed, and/or the well pad is abandoned.

## **SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit P, Section 6, Township 25 South, Range 29 East, in Eddy County, New Mexico (32.15284°, -104.01577°) and is associated with oil and gas exploration and production operations on state land managed by the New Mexico State Land Office (NMSLO).

On December 27, 2023, a 6-inch tee inlet fitting connected to surface piping corroded and resulted in the release of approximately 18 barrels (bbls) of produced water onto the surface of the pad and into the adjacent pasture area. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 7 bbls of released fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on January 9, 2024. The release was assigned Incident Number nAPP2400933895.

## **SITE CHARACTERIZATION AND CLOSURE CRITERIA**

The Site was characterized according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented below. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on a nearby soil boring drilled for determining depth to groundwater. On November 18, 2020, soil boring (C-4493 POD 1) was drilled approximately 300 feet southwest of the Site. Soil boring C-4493 POD 1 (noted as BH-01 in the Well Record and Log) was advanced to a total depth of 57 feet bgs. A field geologist logged and described soils continuously. Groundwater was encountered during drilling

activities at a depth of 39 feet bgs. All wells used to determine depth to groundwater are depicted on Figure 1. Soil boring C-4493 POD 1 Well Record and Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is the Pecos River, located approximately 1,223 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area).

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

## SITE ASSESSMENT ACTIVITIES

On February 20, 2024, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Four delineation soil samples (SS01 through SS04) were collected within the release extent from a depth of approximately 0.5 feet bgs. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was collected during the site assessment and a Photographic Log is included in Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for delineation soil samples SS01 through SS04 indicated that chloride concentrations exceeded the Closure Criteria. Delineation soil samples SS03 and SS04 also contained TPH concentrations that exceeded the Closure Criteria. Benzene and BTEX concentrations for SS01 through SS04 were below the Closure Criteria. Based on visible staining in the release area and laboratory analytical results, additional delineation and excavation activities were warranted.

## CULTURAL RESOURCE SURVEY

Since a portion of the release occurred in pasture area managed by NMSLO, XTO submitted an Archaeological Records Management System (ARMS) review for access approval prior to conducting excavation activities at the Site. The ARMS review was conducted by Beaver Creek Archaeology (BCA)

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and results indicated that the entire area of potential effect or project area has been previously surveyed and no cultural properties were found within the survey areas. Results of the ARMS survey are presented on a Cultural Resources Cover Sheet and is presented in Appendix C. Positive comments on the Cultural Resources Cover Sheet include:

- *The proposed workspace and area of potential effect (APE) are located entirely on existing disturbance and portions of which have also covered by multiple previous surveys, Activity Numbers: 131156, 148061, 144874, 142593, 140267, 135954, 142593, and 146754. No previously recorded sites are located within or within 100 feet of the APE. As such, no further archaeological work is recommended for the project as it is currently planned.*

## DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

On March 18, 2024, Ensolum personnel were at the Site to oversee delineation activities. Four boreholes (BH01 through BH04) were advanced within the release extent area to assess the vertical extent of the release. Boreholes BH01 through BH04 were advanced in the vicinity of soil samples SS01 through SS04, respectively. Delineation soil samples were collected at the terminal depth of each borehole which ranged from 3 feet to 4 feet bgs. Six additional delineation soil samples (SS05 through SS10) were collected around the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of the release. The delineation soil samples were field screened for VOCs and chloride as described above. The delineation soil samples were collected and handled as described above and were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the same COCs listed above but chlorides were analyzed following EPA Method SM4500. Field screening results and observations for the boreholes were logged on lithologic/soil sampling logs, which are included in Appendix D. The delineation soil sample locations are depicted on Figure 2.

On April 25 and 26, 2024, impacted soil was excavated from the release area as indicated by visible staining, field screening activities, and laboratory analytical results. Excavation activities were performed using a backhoe and transport vehicles. The excavation occurred on the well pad near production equipment and in the adjacent pasture area. To direct excavation activities, Ensolum personnel screened soil for VOCs and chlorides. Following removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and floor of the excavation. The 5-point composite soil samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples FS01 through FS07 were collected from the floor of the excavation from depths ranging from 2 feet to 4 feet bgs. Confirmation sidewall soil samples SW01 through SW06 were collected from the sidewalls of the excavation at depths ranging from ground surface to 4 feet bgs. The confirmation soil samples were collected, handled, and analyzed following the same procedures as described above and taken to Cardinal. The excavation extent and confirmation soil sample locations are presented on Figure 3.

Based on laboratory analytical results for confirmation floor soil sample FS03 collected at 4 feet bgs, TPH concentrations slightly exceeded (103.5 mg/kg) the Closure Criteria and Ensolum personnel returned to the Site to oversee additional excavation activities on May 14, 2024. The area of FS03 was excavated to a total depth of 5 feet bgs and composite floor soil sample FS03A was collected in the newly excavated area. Since FS03A is located near the excavation sidewall, composite sidewall soil sample SW07 was collected at depths ranging from ground surface to 5 feet bgs.

The final excavation extent measured approximately 1,215 square feet. A total of approximately 180 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Facility in Hobbs, New Mexico.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples BH01 through BH03, SS05 through SS10, and confirmation soil samples FS01, FS02, FS03A, FS04 through FS07, and all sidewall confirmation soil samples collected indicated COC concentrations in compliance with the Site Closure Criteria and reclamation requirements.

Laboratory analytical results indicated that TPH and chloride concentrations exceeded Closure Criteria in soil sample BH04 collected at 4 feet bgs, however, the excavation in this area was advanced to 4 feet bgs and confirmation soil sample FS02 was subsequently collected, thus providing vertical definition in the area of BH04. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix E.

## RECLAMATION PLAN

Upon completion of excavation activities and receipt of final laboratory analytical results, the excavation was backfilled with locally procured topsoil in the pasture area. One representative 5-point composite sample will be collected from the backfill material to confirm compliance with the NMOCD requirement for the reclaimed area to contain non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg and TPH concentrations less than 100 mg/kg. The backfill sample will be handled and analyzed following the same procedures as described above.

Following backfill activities, the disturbed area was contoured to match the surrounding topography and the surface was prepared for seeding. Upon confirmation that the excavation was backfilled with non-waste containing material, the disturbed pasture area will be seeded with a certified weed-free seed mix. The below NRCS recommended seed mix will be used to seed the Site at the rate specified in pounds of pure live seed (PLS) per acre. Seed species will include:

Species/Cultivar	PLS/Acre
Grama, Blue (Hachita)	0.81
Bluestem, Little	0.67
Sand, Mesa, Giant Dropseed	0.05
Grama, Sideoats	2.28
Wheatgrass, Western (Barton)	2.38

The seed mix will be applied via drill seeding or broadcast seeding. If broadcast seeding is selected, the PLS/acre will be doubled and the seed will be raked in by chaining or dragging the Site. Reclamation activities will be documented with photographs and will be timestamped with Global Positioning System (GPS) data in decimal degrees. The Site will be monitored for vegetation growth to ensure that reclamation activities were successful. Focus for this phase will be to prevent erosion and site degradation, and to monitor for and treat invasive and noxious weed species.

- Erosion control of the newly reclaimed areas includes prompt revegetation and contouring of the surface to prevent concentrated surface water flow.



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- Annual inspections will take place at the location to assess revegetation progress until vegetation is consistent with local natural vegetation density.
- If necessary, an additional application of the BLM seed mix will be applied.
- Noxious and invasive weeds will be identified and treated by licensed contracted herbicide applicator or mechanically removed.

A *Revegetation Report* will be submitted to the NMOCD once vegetation growth in the reclaimed pasture area has uniform vegetative cover that reflects a life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds, per NMAC 19.15.29.13 D.(3).

## DEFERRAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and process piping preventing full excavation of impacted soil. XTO safety policy restricts soil disturbing activities within a 2-foot radius of any on-site, active production equipment. The estimated area of remaining impacted soil measures an area of approximately 400 square feet, and 50 cubic yards of impacted soil remains in place, assuming a depth of 3.5 feet bgs based on delineation and confirmation soil sample laboratory analytical results near the deferral area. The impacted soil is limited to the area beneath active production equipment and surface piping where remediation would require major facility deconstruction. The deferral area is vertically defined by delineation soil samples BH01 through BH03 and all confirmation floor soil samples collected. The release is laterally defined by delineation soil samples SS05 through SS10 and all confirmation sidewall soil samples collected. The proposed deferral area and all delineation and excavation soil samples used to define the deferral area are depicted on Figure 4. The excavation was backfilled on June 6, 2024 with caliche and topsoil material purchased locally and the area was re-contoured to match pre-existing conditions.

XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Based on the presence of active production equipment and process piping within the release area, and the complete lateral and vertical definition of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number nAPP2400933895 until final reclamation of the well pad or major construction, whichever comes first.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or [tmorrissey@ensolum.com](mailto:tmorrissey@ensolum.com).

Sincerely,  
**Ensolum, LLC**

A handwritten signature in black ink, appearing to read "Tracy Hillard".

Tracy Hillard  
Project Manager

A handwritten signature in black ink, appearing to read "Ashley L. Ager".

Ashley L. Ager, M.S., P.G  
Principal

cc: Amy Ruth, XTO  
Amanda Garcia, XTO  
NMSLO

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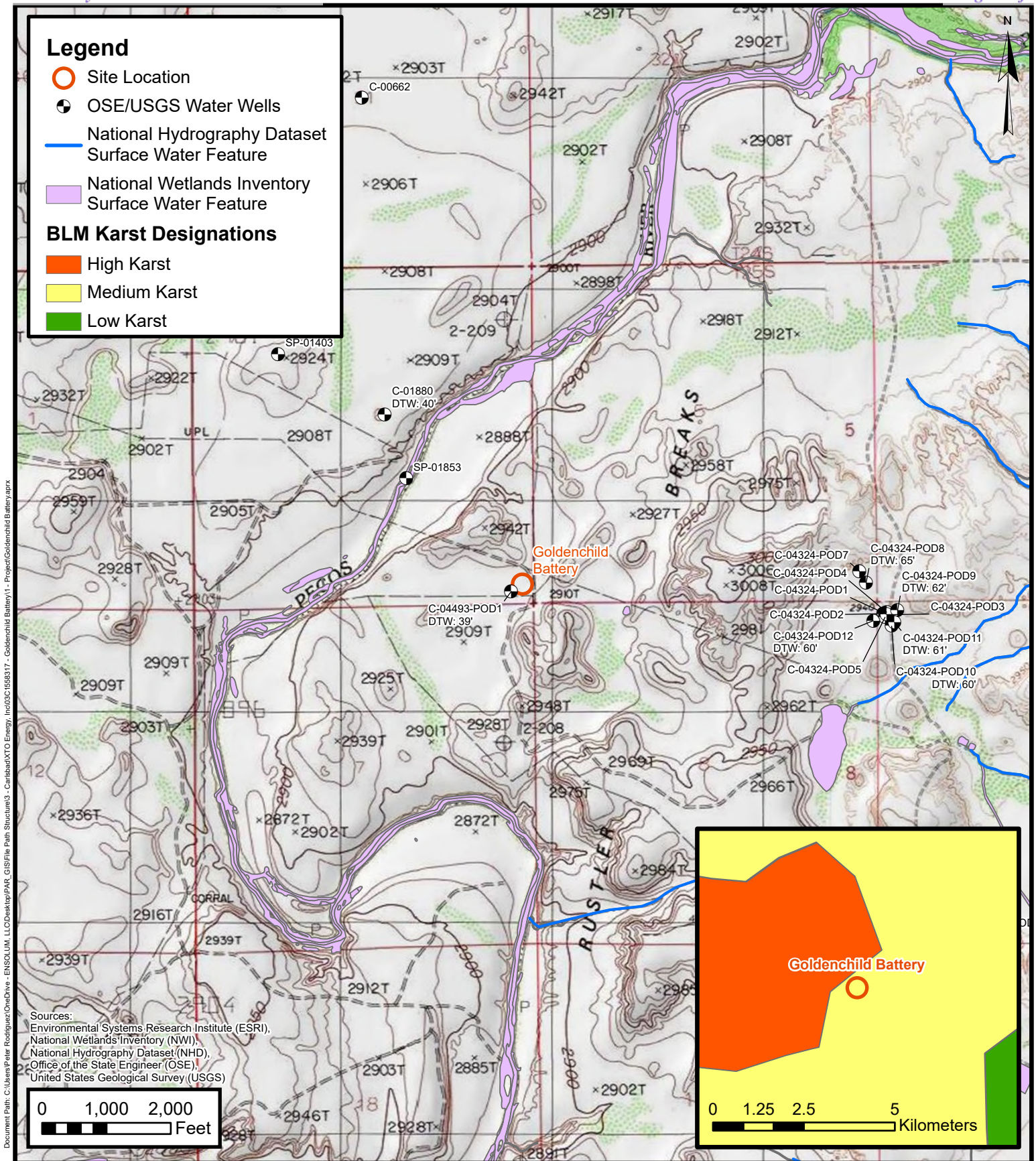
Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Proposed Deferral Area
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Cultural Resources Cover Sheet
Appendix D	Lithologic / Soil Sampling Logs
Appendix E	Laboratory Analytical Reports & Chain-of-Custody Documentation



FIGURES





## Site Receptor Map

XTO Energy, Inc  
 Goldenchild Battery  
 Incident Number: nAPP2400933895  
 Unit P, Sec 6, T25S, R29E  
 Eddy County, New Mexico

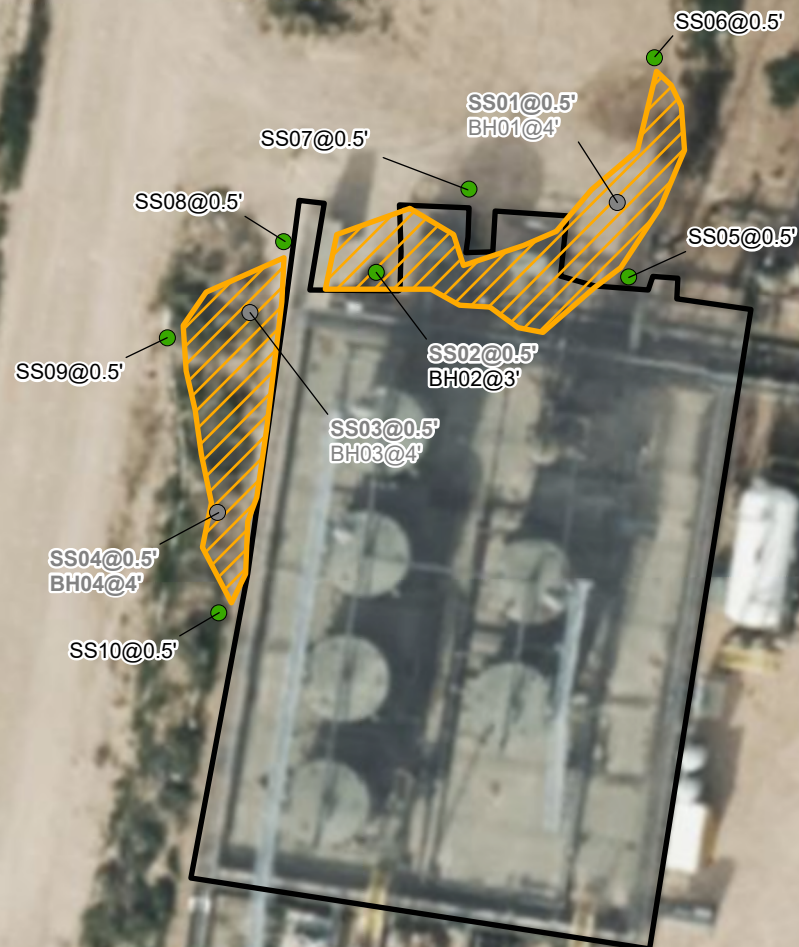
FIGURE  
 1





**Legend**

- Delineation Soil Sample in Compliance with Closure Criteria
- Excavated Soil Sample Location
- Production Equipment
- Release Extent



Notes:  
 Sample ID @ Depth Below Ground Surface  
 Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.  
 Samples in grey indicate samples were removed during excavation activities.

0 35 70  
 Feet

Source:  
 Bing Maps



## Delineation Soil Sample Locations

XTO Energy, Inc  
 Goldenchild Battery  
 Incident Number: nAPP2400933895  
 Unit P, Sec 6, T25S, R29E  
 Eddy County, New Mexico

**FIGURE**  
**2**





## Excavation Soil Sample Locations

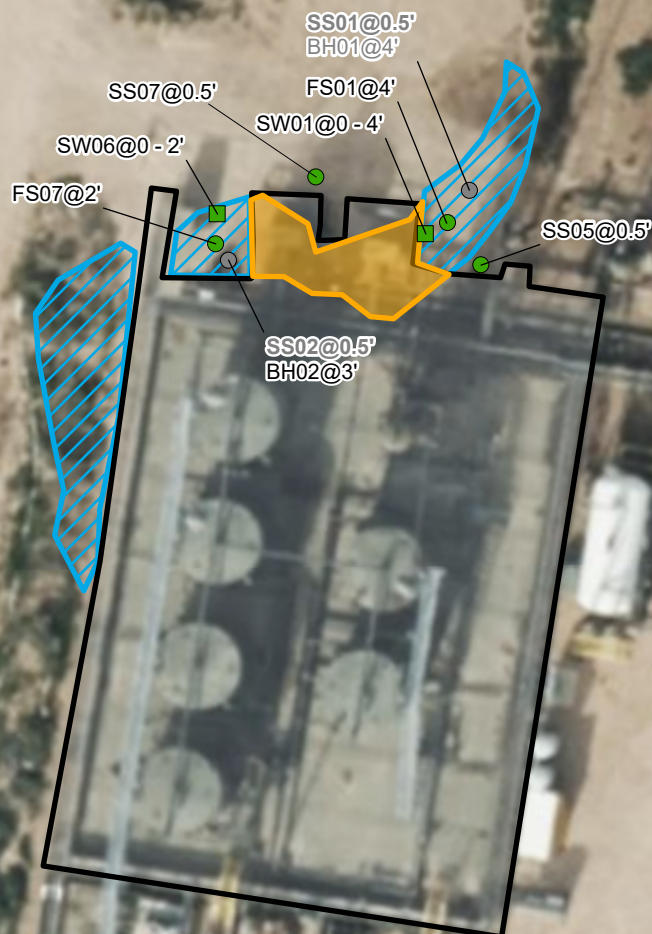
XTO Energy, Inc  
 Goldenchild Battery  
 Incident Number: nAPP2400933895  
 Unit P, Sec 6, T25S, R29E  
 Eddy County, New Mexico

FIGURE  
**3**



## Legend

- Excavation Soil Sample in Compliance with Closure Criteria
- Excavated Soil Sample Location
- Sidewall Excavation Soil Sample in Compliance with Closure Criteria
- Area of Requested Deferral
- Excavation Extent
- Production Equipment



Notes:  
 Sample ID @ Depth Below Ground Surface  
 Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.  
 Samples in grey indicate samples were removed during excavation activities.

0 35 70  
 Feet

Source:  
 Bing Maps



## Area of Requested Deferral

XTO Energy, Inc  
 Goldenchild Battery  
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 Unit P, Sec 6, T25S, R29E  
 Eddy County, New Mexico

FIGURE  
 4



TABLES

TABLE 1  
SOIL SAMPLE ANALYTICAL RESULTS  
Goldenchild Battery  
XTO Energy, Inc  
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
SS01	02/20/2024	0.5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	9,710
BH01	03/18/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64
SS02	02/20/2024	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	8,140
BH02	03/18/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
SS03	02/20/2024	0.5	<0.00202	<0.00403	<50.2	2,970	<50.2	2,970	2,970	6,520
BH03	03/18/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SS04	02/20/2024	0.5	<0.00199	<0.00398	<50.4	216	<50.4	216	216	7,800
BH04	03/18/2024	4	<0.050	<0.300	<10.0	884	<10.0	242	1,126	4,500
SS05	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64
SS06	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96
SS07	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80
SS08	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80
SS09	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64
SS10	03/18/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80
Confirmation Soil Samples										
FS01	04/26/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
FS02	04/26/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS03	04/26/2024	4	<0.050	<0.300	<10.0	84.9	18.6	84.9	103.5	512
FS03A	05/14/2024	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
FS04	04/26/2024	4	<0.050	<0.300	<10.0	15.1	<10.0	15.1	15.1	112
FS05	04/26/2024	4	<0.050	<0.300	<10.0	36.0	<10.0	36.0	36.0	288
FS06	04/26/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
FS07	04/26/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SW01	04/26/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
SW02	04/26/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW03	04/26/2024	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0

TABLE 1  
SOIL SAMPLE ANALYTICAL RESULTS  
Goldenchild Battery  
XTO Energy, Inc  
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
SW04	04/26/2024	0 - 4	<0.050	<0.300	<10.0	39.8	<10.0	39.8	39.8	32.0
SW05	04/26/2024	0 - 2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW06	04/26/2024	0 - 2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
SW07	05/14/2024	0 - 5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96

## Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities





## APPENDIX A

### Referenced Well Records

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# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (BH-01)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-4493			
	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707	
	WELL LOCATION (FROM GPS)	DEGREES 32°		MINUTES 9'	SECONDS 9.09"	N		
		LONGITUDE -104°		0'	58.81"	W		
* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84								
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SE NE SE Sec. 6 T25S R29E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 11/18/2020	DRILLING ENDED 11/18/2020	DEPTH OF COMPLETED WELL (FT) temporary well material		BORE HOLE DEPTH (FT) 57	DEPTH WATER FIRST ENCOUNTERED (FT) ±39		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) 37.05		
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	57	±8.5	Boring- HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4484	POD NO. 1	TRN NO. 681638
LOCATION 444 T25S R29E Sub	WELL TAG ID NO. NA	PAGE 1 OF 2

<b>4. HYDROGEOLOGIC LOG OF WELL</b>	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
	FROM	TO				
	0	1	1	Caliche, Poorly consolidated, with gravel, Off -White -Light Brown	Y    ✓ N	
	1	2	1	Sand, Very fine- grained,poorly-graded, with caliche ,Brown	Y    ✓ N	
	2	14	12	Caliche, Moderately consolidated, with gravel, Off -White -Light Brown, Moist	Y    ✓ N	
	14	29	15	Siltstone, poorly consolidated, low plasticity, cohesive, with sand, Brown, Moist	Y    ✓ N	
	29	57	28	Silty Sandstone, Very fine-grained, well consolidated, trace pebbles, wet	✓ Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
	METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER – SPECIFY:				TOTAL ESTIMATED WELL YIELD (gpm):                 0.00	
	<b>5. TEST; RIG SUPERVISION</b>	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.			
MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring plugged using Portland Type I/II neat cement 94 lbs sack per 5.2 gallons of water. Logs adapted from LTE on-site geologist. <span style="float:right;">OSE DIT DEC 17 2020 PM 3:30</span>						
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge						
<b>6. SIGNATURE</b>	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:					
				Jackie D. Atkins		12/15/20
	SIGNATURE OF DRILLER / PRINT SIGNEE NAME			DATE		

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/30/2017)	
FILE NO.	C-4484	POD NO.	1
LOCATION	444 T25R29E Sect 6	TRN NO.	681638
		WELL TAG ID NO.	NA
			PAGE 2 OF 2



## APPENDIX B

### Photographic Log

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## Photographic Log

XTO Energy, Inc

Goldenchild Battery

Incident Number nAPP2400933895



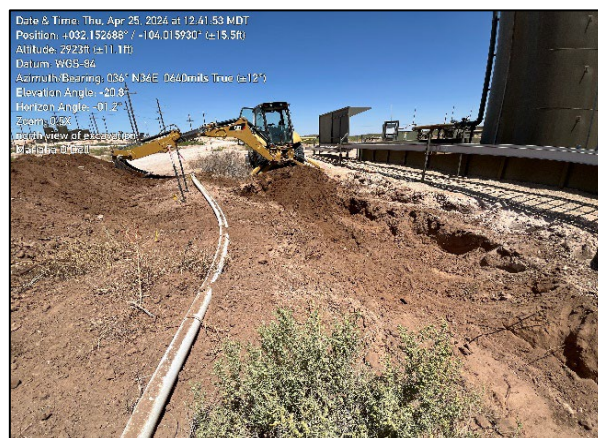
Photograph: 1 Date: 2/20/2024  
Description: Soil staining in release footprint  
View: South



Photograph: 2 Date: 2/29/2024  
Description: Soil staining in release footprint  
View: Southeast



Photograph: 3 Date: 3/18/2024  
Description: Delineation activities with hand auger  
View: South



Photograph: 4 Date: 4/25/2024  
Description: Excavation activities  
View: North



**Photographic Log**

XTO Energy, Inc

Goldenchild Battery

Incident Number nAPP2400933895



Photograph: 5 Date: 4/26/2024  
 Description: Final excavation extent  
 View: North



Photograph: 6 Date: 4/26/2024  
 Description: Final excavation extent  
 View: Southwest



Photograph: 7 Date: 5/14/2024  
 Description: Final excavation extent  
 View: Northwest



Photograph: 8 Date: 6/6/2024  
 Description: Excavation backfilled  
 View: South



## APPENDIX C

### Cultural Resources Cover Sheet

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Stephanie Garcia Richard, Commissioner of Public Lands  
State of New Mexico

## NMSLO Cultural Resources Cover Sheet Exhibit

NMCRIS Activity Number:

(if applicable)

Exhibit Type (select one)

☒ **ARMS Inspection/Review** - Summarize the results (select one):

- ☒ (A) The entire area of potential effect or project area has been previously surveyed to current standards and **no cultural properties** were found within the survey area.
- ☐ (B) The entire area of potential effect or project area has been previously surveyed to current standards and **cultural properties were found** within the survey area.
- ☐ (C) The entire area of potential effect or project area has **not** been previously surveyed or **has not been surveyed** to current standards. A complete archaeological survey will be conducted and submitted for review.

☐ **Archaeological Survey**

Findings:

☐ **Negative** - No further archaeological review is required.

☐ **Positive** - Have avoidance and protection measures been devised? Select one:

**Comments:** The proposed workspace and APE are located entirely on existing disturbance and portions of which have also covered by multiple previous surveys, Activity Numbers: 131156, 148061, 144874, 142593, 140267, 135954, 142593, and 146754. No previously recorded sites are located.

### Project Details:

NMSLO Lease Number (if available):

Cultural Resources Consultant: Beaver Creek Archaeology

Project Proponent (Applicant): Ensolum on behalf of XTO

Project Title/Description: Goldenchild SWD pad Remediation II

### Project Location:

County(ies): Eddy

PLSS/Section/Township/Range: T25S R29E S6

### For NMSLO Agency Use Only:

NMSLO Lease Number:

Acknowledgment-Only: ☐

Lease Analyst:

Date Exhibit Routed to Cultural Resources Office:

No person may alter the wording of the questions or layout of the cover sheet. The completion of this cover sheet by itself does not authorize anyone to engage in new surface disturbing activity before the review and approvals required by the Cultural Properties Protections Rule.


Form Revised 12 22




## APPENDIX D


### Lithologic Soil Sampling Logs


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 <b>ENSOLUM</b> Environmental, Engineering and Hydrogeologic Consultants		Sample Name: BH01		Date: 3/18/2024				
		Site Name: Goldenchild Battery						
		Incident Number: nAPP2400933895						
		Job Number: 03C1558317						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>				Logged By: CW		Method: Hand Auger		
Coordinates: 32.152841, -104.015655				Hole Diameter: 4"		Total Depth: 4'		
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	9,279.2	0.7	Y	SS01	0.5	0	CCHE	0-1' CALICHE, medium brown, poorly sorted, medium grained, stained, odorous, moist.
M	1,002	0.0	N			1	SP	1-4' SAND with silt, brown, very fine grained, poorly sorted, no stain, no odor, moist.
M	512	0.0	N			2		
M	408	0.0	N			3		
M	<168	0.0	N	BH01	4	4		
						TD		
Total Depth @ 4 feet bgs								
<div></div>								



 <b>ENSOLUM</b> Environmental, Engineering and Hydrogeologic Consultants		Sample Name: BH02		Date: 3/18/2024				
		Site Name: Goldenchild Battery						
		Incident Number: nAPP2400933895						
		Job Number: 03C1558317						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>				Logged By: CW		Method: Hand Auger		
Coordinates: 32.152807, -104.015797				Hole Diameter: 4"		Total Depth: 3'		
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	10,802.4	23.4	Y	SS02	0.5	0	CCHE	0-1' CALICHE, medium brown, poorly sorted, medium grained, stained, odorous, moist.
M	5,712	17.4	N			1	SP	1-3' SAND with silt, brown, very fine grained, poorly grained, no stain, no odor, moist.
M	5,712	1.5	N			2		
M	274	0.0	N	BH02	3	3		
						TD		
Total Depth @ 3 feet bgs								

<div><div><div>ENSOLUM Environmental, Engineering and Hydrogeologic Consultants</div></div><div><div>Sample Name: BH03</div><div>Site Name: Goldenchild Battery</div><div>Incident Number: nAPP2400933895</div><div>Job Number: 03C1558317</div></div></div>								<div>Date: 3/18/2024</div>			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								<div>Logged By: CW</div>		<div>Method: Hand Auger</div>	
Coordinates: 32.152788, -104.015872								Hole Diameter: 4"		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	5,885.6	19.8	Y	SS03	0.5	0	SP	0-4' SAND with silt and clay, brown, very fine grained, poorly sorted, odor and staining through 0.5', moist.			
M	4,054	1.0	N			1					
M	4,054	0.0	N			2					
M	4,054	0.0	N			3					
M	274	0.0	N	BH03	4	4					
						TD					
Total Depth @ 4 feet bgs											
<div></div>											

<div><div><div>ENSOLUM Environmental, Engineering and Hydrogeologic Consultants</div></div><div><div>Sample Name: BH04</div><div>Site Name: Goldenchild Battery</div><div>Incident Number: nAPP2400933895</div><div>Job Number: 03C1558317</div></div></div>								<div>Date: 3/18/2024</div>				
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								<div>Logged By: CW</div>		<div>Method: Hand Auger</div>		
Coordinates: 32.152687, -104.015892								Hole Diameter: 4"		Total Depth: 4'		
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included in all chloride screenings.												
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions				
M	6,860	1.5	Y	SS04	0.5	0	SP	0-4' SAND with silt and clay, brown, very fine grained, poorly sorted, odor and staining through 0.5', moist.				
M	8,573	0.0	N			1						
M	7,313	0.0	N			2						
M	7,313	0.0	N			3						
M	6,199	0.0	N	BH04	4	4						
							TD	Auger Refusal				
Total Depth @ 4 feet bgs												



## APPENDIX E

### Laboratory Analytical Reports & Chain of Custody Documentation

---



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 02, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDENCHILD BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 04/26/24 16:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: FS 01 4' (H242258-01)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	05/01/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	220	110	200	5.12	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	216	108	200	7.53	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.7 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: FS 02 4' (H242258-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/01/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 86.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: FS 03 4' (H242258-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	05/01/2024	ND	432	108	400	0.00	

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	84.9	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	18.6	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 94.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.1 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: FS 04 4' (H242258-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11		
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08		
Total BTEX	<0.300	0.300	05/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	05/01/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	15.1	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.6 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: FS 05 4' (H242258-05)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11		
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08		
Total BTEX	<0.300	0.300	05/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	05/01/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	36.0	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 86.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SW 01 0-4' (H242258-06)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	05/01/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SW 02 0-4' (H242258-07)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/01/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 75.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 59.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SW 03 0-4' (H242258-08)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/01/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SW 04 0-4' (H242258-09)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/01/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	39.8	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 95.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SW 05 0-4' (H242258-10)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/01/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SW 06 0-2' (H242258-11)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/01/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 97.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: FS 06 4' (H242258-12)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.97	98.4	2.00	3.11	
Toluene*	<0.050	0.050	05/01/2024	ND	1.97	98.3	2.00	2.25	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	2.05	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.79	96.6	6.00	2.08	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	05/01/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 99.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 04/26/2024  
Reported: 05/02/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 04/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: FS 07 2' (H242258-13)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/30/2024	ND	2.21	110	2.00	6.34		
Toluene*	<0.050	0.050	04/30/2024	ND	2.33	117	2.00	9.84		
Ethylbenzene*	<0.050	0.050	04/30/2024	ND	2.53	126	2.00	11.3	QM-07	
Total Xylenes*	<0.150	0.150	04/30/2024	ND	7.72	129	6.00	12.1	QM-07	
Total BTEx	<0.300	0.300	04/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	05/01/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.28	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	193	96.4	200	0.167	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 95.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.7 % 49.1-148

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### Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "C. D. Keene", is written over a horizontal line.

---

Celey D. Keene, Lab Director/Quality Manager





101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

**Company Name:** Ensolum, LLC  
**Project Manager:** Ben Bell  
**Address:** 3122 National Parks Hwy  
**City:** Carlsbad  
**State:** NM **Zip:** 88220  
**Phone #:** 989-854-0852 **Fax #:**  
**Project #:** 03C1558317 **Project Owner:**  
**Project Name:** Goldenchild Battery  
**Project Location:** 32-15284-104-01577  
**Sample Name:** Mariahna O'Dell

**FOR LAB USE ONLY**

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH	BTEX
124258	ES01	4'	C	1			X							4/20/24	9:30	X	X	X
	ES02	4'													9:30			
	ES03	4'													11:10			
	ES04	4'													12:30			
	ES05	4'													12:25			
	SW01	0-4'													0:25			
	SW02	0-4'													0:35			
	SW03	0-4'													11:25			
	SW04	0-4'													11:30			
	SW05	0-4'													14:50			

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**Relinquished By:** [Signature]  
**Date:** 4/20/24  
**Time:** 10:40  
**Received By:** [Signature]  
**Date:**  
**Time:**

**Delivered By: (Circle One)**  
Sampler - UPS - Bus - Other: **Corrected Temp. °C** 5.0  
**Sample Condition:** Cool Intact ☒ Yes ☐ No  
**Checked By:** [Signature]

**REMARKS:** Incident #: 19APP2400933895  
Facility ID: 19APP2426046044  
Turnaround Time: 2 day  
Thermometer ID: 419  
Correction Factor: -0.5°C  
Standard ☒ Bacteria (only) Sample Condition ☒ Cool Intact ☐ Yes ☐ No  
Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to ceter@cardinallabsnm.com





101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Ben Bell

Address: 3122 National Parks Hwy

City: Carlsbad

State: NM Zip: 88220

Phone #: 489-854-0852 Fax #:

Project #: 03C1558317 Project Owner:

Project Name: Goldenchild Battery

Project Location: 32.15284,-104.01517

Sampler Name: Mahana O'Dell

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: XT Energy

Attn: Amy Ruth

Address: 3104 E. Brenne St

City: Carlsbad

State: NM Zip: 88220

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Depth (feet)

12468

SWOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

ESOL

(G)RAB OR (G)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

MATRIX

PRESERV

SAMPLING

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

Chlorides

TPH

BTEX

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Relinquished By:

Date: 4/24/24

Time: 10:40

Received By:

Date: 4/24/24

Time: 10:40

Received By:

Date: 4/24/24

Time: 10:40

Received By:

Date: 4/24/24

Time: 10:40

Received By:

Date: 4/24/24

Time: 10:40

Relinquished By:

Date: 4/24/24

Time: 10:40

Received By:

Date: 4/24/24

Time: 10:40

Received By:

Date: 4/24/24

Time: 10:40

Received By:

Date: 4/24/24

Time: 10:40

Received By:

Date: 4/24/24

Time: 10:40

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C

Corrected Temp. °C

Sample Condition

Cool Intact

Yes No

Checked By:

Initials

Turnaround Time:

Standard

Bacteria (only) Sample Condition

Cool Intact

Observed Temp. °C

Corrected Temp. °C

Cardinal cannot accept verbal changes. Please email changes to cefey@cardinallabsnm.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 22, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDENCHILD BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/18/24 14:09.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 03/18/2024  
Reported: 03/22/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO

Sampling Date: 03/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Dionica Hinojos

**Sample ID: SS 05 0.5' (H241386-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/19/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 03/18/2024  
Reported: 03/22/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO

Sampling Date: 03/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Dionica Hinojos

**Sample ID: SS 06 0.5' (H241386-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/19/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 BEN BELILL  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received: 03/18/2024  
 Reported: 03/22/2024  
 Project Name: GOLDENCHILD BATTERY  
 Project Number: 03C1558317  
 Project Location: XTO

Sampling Date: 03/18/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Dionica Hinojos

**Sample ID: SS 07 0.5' (H241386-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/20/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 97.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 03/18/2024  
Reported: 03/22/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO

Sampling Date: 03/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Dionica Hinojos

**Sample ID: SS 08 0.5' (H241386-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/20/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 86.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 BEN BELILL  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received: 03/18/2024  
 Reported: 03/22/2024  
 Project Name: GOLDENCHILD BATTERY  
 Project Number: 03C1558317  
 Project Location: XTO

Sampling Date: 03/18/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Dionica Hinojos

**Sample ID: SS 09 0.5' (H241386-05)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/20/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 90.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 03/18/2024  
Reported: 03/22/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO

Sampling Date: 03/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Dionica Hinojos

**Sample ID: SS 10 0.5' (H241386-06)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/20/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 61.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 53.6 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 BEN BELILL  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received: 03/18/2024  
 Reported: 03/22/2024  
 Project Name: GOLDENCHILD BATTERY  
 Project Number: 03C1558317  
 Project Location: XTO

Sampling Date: 03/18/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Dionica Hinojos

**Sample ID: BH 01 4' (H241386-07)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/20/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 73.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 64.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 03/18/2024  
Reported: 03/22/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO

Sampling Date: 03/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Dionica Hinojos

**Sample ID: BH 02 3' (H241386-08)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	03/20/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 03/18/2024  
Reported: 03/22/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO

Sampling Date: 03/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Dionica Hinojos

**Sample ID: BH 03 4' (H241386-09)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/20/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	<10.0	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	<10.0	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 03/18/2024  
Reported: 03/22/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO

Sampling Date: 03/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Dionica Hinojos

**Sample ID: BH 04 4' (H241386-10)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/20/2024	ND	2.12	106	2.00	2.54	
Toluene*	<0.050	0.050	03/20/2024	ND	2.15	107	2.00	7.48	
Ethylbenzene*	<0.050	0.050	03/20/2024	ND	2.19	109	2.00	11.2	
Total Xylenes*	<0.150	0.150	03/20/2024	ND	6.50	108	6.00	11.8	
Total BTEX	<0.300	0.300	03/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4500	16.0	03/20/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/19/2024	ND	192	96.0	200	2.82	
DRO >C10-C28*	884	10.0	03/19/2024	ND	200	99.8	200	6.32	
EXT DRO >C28-C36	242	10.0	03/19/2024	ND					

Surrogate: 1-Chlorooctane 89.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "C. D. Keene".

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																				
Project Manager: Ben Belli		P.O. #:																						
Address: 3122 National Parks Hwy		Company: XTO Energy Inc.																						
City: Carlsbad		Attn: Amy Ruth																						
Phone #: 337 257-8307		Address: 3104 E. Green St.																						
Fax #:		City: Carlsbad																						
Project #: 03C1558317		State: NM Zip: 88220																						
Project Name: Goldenchild Battery		Phone #:																						
Project Location:		Fax #:																						
Sampler Name: Connor Whitman																								
FOR LAB USE ONLY																								
Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING													
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	CE / COOL	OTHER :	DATE	TIME	TPH	BTEX	Chloride						
H241384	SS05	0.5	(G)	1										3/18/24	930									
1	SS06														935									
2	SS07														940									
3	SS08														945									
4	SS09														950									
5	SS10														955									
6	BH01	4													1015									
7	BH02	3													1030									
8	BH03	4													1050									
9	BH04	4													1110									
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Relinquished By: CTH		Date: 3/18/24		Received By: CTH		Date: 3/18/24		Time: 14:09		Time: 14:09		Received By: CTH		Date: 3/18/24		Time: 14:09		Time: 14:09						
Relinquished By: CTH		Date: 3/18/24		Received By: CTH		Date: 3/18/24		Time: 14:09		Time: 14:09		Received By: CTH		Date: 3/18/24		Time: 14:09		Time: 14:09						
Delivered By: (Circle One)		Observed Temp. °C		Corrected Temp. °C		Sample Condition		CHECKED BY: (Initials)		Turnaround Time:		Standard		Rush		Bacteria (only)		Sample Condition						
Sampler - UPS - Bus - Other:		Corrected Temp. °C		Sample Condition		CHECKED BY: (Initials)		Turnaround Time:		Standard		Rush		Bacteria (only)		Sample Condition		Sample Condition						
FORM-009 R 3.2 10/07/21		Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com																						



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 20, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: GOLDENCHILD BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/14/24 16:49.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM  
 BEN BELILL  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received: 05/14/2024  
 Reported: 05/20/2024  
 Project Name: GOLDENCHILD BATTERY  
 Project Number: 03C1558317  
 Project Location: XTO 32.15284, -104.01577

Sampling Date: 05/14/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FS 03 A (H242654-01)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/17/2024	ND	2.03	102	2.00	3.73	
Toluene*	<0.050	0.050	05/17/2024	ND	1.96	97.9	2.00	3.80	
Ethylbenzene*	<0.050	0.050	05/17/2024	ND	1.99	99.5	2.00	3.39	
Total Xylenes*	<0.150	0.150	05/17/2024	ND	5.69	94.8	6.00	3.24	
Total BTEX	<0.300	0.300	05/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	05/16/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/16/2024	ND	181	90.6	200	2.03	
DRO >C10-C28*	<10.0	10.0	05/16/2024	ND	183	91.7	200	0.657	
EXT DRO >C28-C36	<10.0	10.0	05/16/2024	ND					

Surrogate: 1-Chlorooctane 70.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 61.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEN BELILL  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 05/14/2024  
Reported: 05/20/2024  
Project Name: GOLDENCHILD BATTERY  
Project Number: 03C1558317  
Project Location: XTO 32.15284, -104.01577

Sampling Date: 05/14/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: SW 07 (H242654-02)**

BTEx 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/17/2024	ND	2.03	102	2.00	3.73	
Toluene*	<0.050	0.050	05/17/2024	ND	1.96	97.9	2.00	3.80	
Ethylbenzene*	<0.050	0.050	05/17/2024	ND	1.99	99.5	2.00	3.39	
Total Xylenes*	<0.150	0.150	05/17/2024	ND	5.69	94.8	6.00	3.24	
Total BTEX	<0.300	0.300	05/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	05/16/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/16/2024	ND	181	90.6	200	2.03	
DRO >C10-C28*	<10.0	10.0	05/16/2024	ND	183	91.7	200	0.657	
EXT DRO >C28-C36	<10.0	10.0	05/16/2024	ND					

Surrogate: 1-Chlorooctane 79.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.9 % 49.1-148

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Tacoma Morrissey  
Ensolum  
601 N. Marienfeld St.  
Suite 400  
Midland, Texas 79701

Generated 2/28/2024 3:38:43 PM

## JOB DESCRIPTION

GOLDENCHILD BATTERY  
03C1558317

## JOB NUMBER

890-6233-1

Eurofins Carlsbad  
1089 N Canal St.  
Carlsbad NM 88220



# Eurofins Carlsbad

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



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Authorized for release by  
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Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Laboratory Job ID: 890-6233-1  
SDG: 03C1558317

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Definitions/Glossary

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

## Case Narrative

Client: Ensolum  
Project: GOLDENCHILD BATTERY

Job ID: 890-6233-1

**Job ID: 890-6233-1**

**Eurofins Carlsbad**

### Job Narrative 890-6233-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 2/21/2024 11:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.4°C.

#### Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS 01 (890-6233-1), SS 02 (890-6233-2), SS 03 (890-6233-3) and SS 04 (890-6233-4).

#### GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-74049 and analytical batch 880-74123 was outside the upper control limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-74123 recovered above the upper control limit for Toluene and Ethylbenzene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-74123/20).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-74001 and analytical batch 880-74025 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: SS 01 (890-6233-1), SS 02 (890-6233-2), SS 03 (890-6233-3), SS 04 (890-6233-4), (890-6251-A-7-E), (890-6251-A-7-F MS) and (890-6251-A-7-G MSD). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-74001 and analytical batch 880-74025. The associated laboratory control sample (LCS) met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Client Sample ID: SS 01  
Date Collected: 02/20/24 09:05  
Date Received: 02/21/24 11:50  
Sample Depth: 0.5'

Lab Sample ID: 890-6233-1  
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00199	U	0.00199	mg/Kg	-	02/26/24 13:52	02/28/24 02:22	1	
Toluene	<0.00199	U	0.00199	mg/Kg	-	02/26/24 13:52	02/28/24 02:22	1	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg	-	02/26/24 13:52	02/28/24 02:22	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg	-	02/26/24 13:52	02/28/24 02:22	1	
o-Xylene	<0.00199	U	0.00199	mg/Kg	-	02/26/24 13:52	02/28/24 02:22	1	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg	-	02/26/24 13:52	02/28/24 02:22	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		70 - 130			02/26/24 13:52	02/28/24 02:22	1	
1,4-Difluorobenzene (Surr)	99		70 - 130			02/26/24 13:52	02/28/24 02:22	1	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00398	U	0.00398	mg/Kg	-		02/28/24 02:22	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.7	U	49.7	mg/Kg	-		02/27/24 00:23	1	

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg	-	02/26/24 09:46	02/27/24 00:23	1	
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg	-	02/26/24 09:46	02/27/24 00:23	1	
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg	-	02/26/24 09:46	02/27/24 00:23	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	8	S1-	70 - 130			02/26/24 09:46	02/27/24 00:23	1	
o-Terphenyl	0.5	S1-	70 - 130			02/26/24 09:46	02/27/24 00:23	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	9710		100	mg/Kg	-		02/25/24 17:11	20	

Client Sample ID: SS 02  
Date Collected: 02/20/24 09:10  
Date Received: 02/21/24 11:50  
Sample Depth: 0.5'

Lab Sample ID: 890-6233-2  
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00201	U	0.00201	mg/Kg	-	02/26/24 13:52	02/28/24 02:42	1	
Toluene	<0.00201	U	0.00201	mg/Kg	-	02/26/24 13:52	02/28/24 02:42	1	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg	-	02/26/24 13:52	02/28/24 02:42	1	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg	-	02/26/24 13:52	02/28/24 02:42	1	
o-Xylene	<0.00201	U	0.00201	mg/Kg	-	02/26/24 13:52	02/28/24 02:42	1	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg	-	02/26/24 13:52	02/28/24 02:42	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	102		70 - 130			02/26/24 13:52	02/28/24 02:42	1	

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Client Sample Results

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Client Sample ID: SS 02

Lab Sample ID: 890-6233-2

Date Collected: 02/20/24 09:10

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	101		70 - 130	02/26/24 13:52	02/28/24 02:42	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/28/24 02:42	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			02/27/24 00:48	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		02/26/24 09:46	02/27/24 00:48	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		02/26/24 09:46	02/27/24 00:48	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		02/26/24 09:46	02/27/24 00:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	7	S1-	70 - 130			02/26/24 09:46	02/27/24 00:48	1
o-Terphenyl	0.5	S1-	70 - 130			02/26/24 09:46	02/27/24 00:48	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8140		101	mg/Kg			02/25/24 17:16	20

Client Sample ID: SS 03

Lab Sample ID: 890-6233-3

Date Collected: 02/20/24 09:15

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		02/26/24 13:52	02/28/24 03:03	1
Toluene	<0.00202	U	0.00202	mg/Kg		02/26/24 13:52	02/28/24 03:03	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/26/24 13:52	02/28/24 03:03	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		02/26/24 13:52	02/28/24 03:03	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/26/24 13:52	02/28/24 03:03	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		02/26/24 13:52	02/28/24 03:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			02/26/24 13:52	02/28/24 03:03	1
1,4-Difluorobenzene (Surr)	96		70 - 130			02/26/24 13:52	02/28/24 03:03	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			02/28/24 03:03	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2970		50.2	mg/Kg			02/27/24 01:12	1

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Client Sample Results

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Client Sample ID: SS 03

Lab Sample ID: 890-6233-3

Date Collected: 02/20/24 09:15

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2	mg/Kg		02/26/24 09:46	02/27/24 01:12	1	
Diesel Range Organics (Over C10-C28)	2970		50.2	mg/Kg		02/26/24 09:46	02/27/24 01:12	1	
Oil Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		02/26/24 09:46	02/27/24 01:12	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	76		70 - 130			02/26/24 09:46	02/27/24 01:12	1	
o-Terphenyl	62	S1-	70 - 130			02/26/24 09:46	02/27/24 01:12	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	6520		49.5	mg/Kg			02/25/24 17:53	10	

Client Sample ID: SS 04

Lab Sample ID: 890-6233-4

Date Collected: 02/20/24 09:20

Matrix: Solid

Date Received: 02/21/24 11:50

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00199	U	0.00199	mg/Kg		02/26/24 13:52	02/28/24 03:23	1	
Toluene	<0.00199	U	0.00199	mg/Kg		02/26/24 13:52	02/28/24 03:23	1	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/26/24 13:52	02/28/24 03:23	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/26/24 13:52	02/28/24 03:23	1	
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/26/24 13:52	02/28/24 03:23	1	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/26/24 13:52	02/28/24 03:23	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	103		70 - 130			02/26/24 13:52	02/28/24 03:23	1	
1,4-Difluorobenzene (Surr)	99		70 - 130			02/26/24 13:52	02/28/24 03:23	1	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/28/24 03:23	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	216		50.4	mg/Kg			02/27/24 01:36	1	

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4	mg/Kg		02/26/24 09:46	02/27/24 01:36	1	
Diesel Range Organics (Over C10-C28)	216		50.4	mg/Kg		02/26/24 09:46	02/27/24 01:36	1	
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		02/26/24 09:46	02/27/24 01:36	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	41	S1-	70 - 130			02/26/24 09:46	02/27/24 01:36	1	
o-Terphenyl	32	S1-	70 - 130			02/26/24 09:46	02/27/24 01:36	1	

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Client Sample Results

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Client Sample ID: SS 04  
Date Collected: 02/20/24 09:20  
Date Received: 02/21/24 11:50  
Sample Depth: 0.5'

Lab Sample ID: 890-6233-4  
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	7800		49.6	mg/Kg			02/25/24 18:07	10	

## Surrogate Summary

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

## Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-6233-1	SS 01	88	99
890-6233-1 MS	SS 01	124	100
890-6233-1 MSD	SS 01	108	102
890-6233-2	SS 02	102	101
890-6233-3	SS 03	99	96
890-6233-4	SS 04	103	99
LCS 880-74049/1-A	Lab Control Sample	100	99
LCSD 880-74049/2-A	Lab Control Sample Dup	114	96
MB 880-74021/5-A	Method Blank	129	129
MB 880-74049/5-A	Method Blank	135 S1+	130
<b>Surrogate Legend</b>			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-6233-1	SS 01	8 S1-	0.5 S1-
890-6233-2	SS 02	7 S1-	0.5 S1-
890-6233-3	SS 03	76	62 S1-
890-6233-4	SS 04	41 S1-	32 S1-
890-6251-A-7-F MS	Matrix Spike	2 S1-	0.4 S1-
890-6251-A-7-G MSD	Matrix Spike Duplicate	3 S1-	0.3 S1-
LCS 880-74001/2-A	Lab Control Sample	93	85
LCSD 880-74001/3-A	Lab Control Sample Dup	94	96
MB 880-74001/1-A	Method Blank	174 S1+	160 S1+
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-74021/5-A  
Matrix: Solid  
Analysis Batch: 74123

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 74021

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/26/24 11:29	02/27/24 14:15	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/26/24 11:29	02/27/24 14:15	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/26/24 11:29	02/27/24 14:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/26/24 11:29	02/27/24 14:15	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/26/24 11:29	02/27/24 14:15	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/26/24 11:29	02/27/24 14:15	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			02/26/24 11:29	02/27/24 14:15	1
1,4-Difluorobenzene (Surr)	129		70 - 130			02/26/24 11:29	02/27/24 14:15	1

Lab Sample ID: MB 880-74049/5-A  
Matrix: Solid  
Analysis Batch: 74123

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 74049

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 01:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 01:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 01:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/26/24 13:52	02/28/24 01:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/26/24 13:52	02/28/24 01:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/26/24 13:52	02/28/24 01:53	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130			02/26/24 13:52	02/28/24 01:53	1
1,4-Difluorobenzene (Surr)	130		70 - 130			02/26/24 13:52	02/28/24 01:53	1

Lab Sample ID: LCS 880-74049/1-A  
Matrix: Solid  
Analysis Batch: 74123

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 74049

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1160		mg/Kg		116	70 - 130
Toluene	0.100	0.1063		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1247		mg/Kg		125	70 - 130
m-Xylene & p-Xylene	0.200	0.2118		mg/Kg		106	70 - 130
o-Xylene	0.100	0.1039		mg/Kg		104	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	100		70 - 130				
1,4-Difluorobenzene (Surr)	99		70 - 130				

Lab Sample ID: LCSD 880-74049/2-A  
Matrix: Solid  
Analysis Batch: 74123

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 74049

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1153		mg/Kg		115	70 - 130	1	35

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QC Sample Results

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-74049/2-A						Client Sample ID: Lab Control Sample Dup					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 74123						Prep Batch: 74049					
			Spike	LCSD	LCSD				%Rec	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene			0.100	0.1097		mg/Kg		110	70 - 130	3	35
Ethylbenzene			0.100	0.1165		mg/Kg		116	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2037		mg/Kg		102	70 - 130	4	35
o-Xylene			0.100	0.1155		mg/Kg		116	70 - 130	11	35
			LCSD	LCSD							
Surrogate		%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)		114		70 - 130							
1,4-Difluorobenzene (Surr)		96		70 - 130							

Lab Sample ID: 890-6233-1 MS								Client Sample ID: SS 01			
Matrix: Solid								Prep Type: Total/NA			
Analysis Batch: 74123								Prep Batch: 74049			
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00199	U	0.101	0.09725		mg/Kg		96	70 - 130		
Toluene	<0.00199	U	0.101	0.09650		mg/Kg		96	70 - 130		
Ethylbenzene	<0.00199	U	0.101	0.1129		mg/Kg		112	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.202	0.2162		mg/Kg		107	70 - 130		
o-Xylene	<0.00199	U	0.101	0.09884		mg/Kg		98	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	124		70 - 130								
1,4-Difluorobenzene (Surr)	100		70 - 130								

Lab Sample ID: 890-6233-1 MSD								Client Sample ID: SS 01			
Matrix: Solid								Prep Type: Total/NA			
Analysis Batch: 74123								Prep Batch: 74049			
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U	0.100	0.1073		mg/Kg		107	70 - 130	10	35
Toluene	<0.00199	U	0.100	0.1022		mg/Kg		102	70 - 130	6	35
Ethylbenzene	<0.00199	U	0.100	0.1029		mg/Kg		103	70 - 130	9	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1780		mg/Kg		89	70 - 130	19	35
o-Xylene	<0.00199	U	0.100	0.09361		mg/Kg		93	70 - 130	5	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	108		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-74001/1-A				Client Sample ID: Method Blank							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 74025				Prep Batch: 74001							
Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil	Fac		
	Result	Qualifier									
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/26/24 09:46	02/26/24 12:29	1			

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## QC Sample Results

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

## Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-74001/1-A

Matrix: Solid

Analysis Batch: 74025

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 74001

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/26/24 09:46	02/26/24 12:29	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/26/24 09:46	02/26/24 12:29	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	174	S1+	70 - 130			02/26/24 09:46	02/26/24 12:29	1
o-Terphenyl	160	S1+	70 - 130			02/26/24 09:46	02/26/24 12:29	1

Lab Sample ID: LCS 880-74001/2-A

Matrix: Solid

Analysis Batch: 74025

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 74001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	908.2		mg/Kg		91	70 - 130
Diesel Range Organics (Over C10-C28)	1000	746.4		mg/Kg		75	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	93		70 - 130				
o-Terphenyl	85		70 - 130				

Lab Sample ID: LCSD 880-74001/3-A

Matrix: Solid

Analysis Batch: 74025

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 74001

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	965.5		mg/Kg		97	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	793.2		mg/Kg		79	70 - 130	6	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	94		70 - 130						
o-Terphenyl	96		70 - 130						

Lab Sample ID: 890-6251-A-7-F MS

Matrix: Solid

Analysis Batch: 74025

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 74001

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.7	U F1 F2	998	<49.9	U F1	mg/Kg		2	70 - 130
Diesel Range Organics (Over C10-C28)	<49.7	U F1	998	<49.9	U F1	mg/Kg		-0.3	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	2	S1-	70 - 130						
o-Terphenyl	0.4	S1-	70 - 130						

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## QC Sample Results

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

## Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: 890-6251-A-7-G MSD**

**Matrix: Solid**

**Analysis Batch: 74025**

**Client Sample ID: Matrix Spike Duplicate**

Prep Type: Total/NA

**Prep Batch: 74001**

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.7	U F1 F2	998	57.10	F1 F2	mg/Kg		3	70 - 130	32	20
Diesel Range Organics (Over C10-C28)	<49.7	U F1	998	<49.9	U F1	mg/Kg		-0.4	70 - 130	3	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	3	S1-	70 - 130								
o-Terphenyl	0.3	S1-	70 - 130								

**Method: 300.0 - Anions, Ion Chromatography**

**Lab Sample ID: MB 880-73848/1-A**

**Matrix: Solid**

**Analysis Batch: 73932**

**Client Sample ID: Method Blank**

**Prep Type: Soluble**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<5.00	U	5.00	mg/Kg			02/25/24 14:57	1

**Lab Sample ID: LCS 880-73848/2-A**

**Matrix: Solid**

**Analysis Batch: 73932**

**Client Sample ID: Lab Control Sample**

**Prep Type: Soluble**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	232.2		mg/Kg		93	90 - 110

**Lab Sample ID: LCSD 880-73848/3-A**

**Matrix: Solid**

**Analysis Batch: 73932**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Soluble**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	RPD	RPD
							Limits		Limit
Chloride	250	234.1		mg/Kg		94	90 - 110	1	20

**Lab Sample ID: 890-6232-A-23-B MS**

**Matrix: Solid**

**Analysis Batch: 73932**

**Client Sample ID: Matrix Spike**

**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	170		252	398.8		mg/Kg		91	90 - 110

**Lab Sample ID: 890-6232-A-23-C MSD**

**Matrix: Solid**

**Analysis Batch: 73932**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	170		252	400.8		mg/Kg		91	90 - 110	0	20

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QC Sample Results

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-73849/1-A Matrix: Solid Analysis Batch: 73933										Client Sample ID: Method Blank Prep Type: Soluble		
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac				
Chloride	<5.00	U	5.00	mg/Kg			02/25/24 17:39	1				

Lab Sample ID: LCS 880-73849/2-A Matrix: Solid Analysis Batch: 73933										Client Sample ID: Lab Control Sample Prep Type: Soluble		
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits			
Chloride			250	234.8		mg/Kg		94	90 - 110			

Lab Sample ID: LCSD 880-73849/3-A Matrix: Solid Analysis Batch: 73933										Client Sample ID: Lab Control Sample Dup Prep Type: Soluble		
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Chloride			250	236.9		mg/Kg		95	90 - 110	1	20	

Lab Sample ID: 890-6233-3 MS Matrix: Solid Analysis Batch: 73933										Client Sample ID: SS 03 Prep Type: Soluble		
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits			
Chloride	6520		2480	8969		mg/Kg		99	90 - 110			

Lab Sample ID: 890-6233-3 MSD Matrix: Solid Analysis Batch: 73933										Client Sample ID: SS 03 Prep Type: Soluble		
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Chloride	6520		2480	8982		mg/Kg		100	90 - 110	0	20	

## QC Association Summary

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

## GC VOA

## Prep Batch: 74021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-74021/5-A	Method Blank	Total/NA	Solid	5035	

## Prep Batch: 74049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-1	SS 01	Total/NA	Solid	5035	
890-6233-2	SS 02	Total/NA	Solid	5035	
890-6233-3	SS 03	Total/NA	Solid	5035	
890-6233-4	SS 04	Total/NA	Solid	5035	
MB 880-74049/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-74049/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-74049/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6233-1 MS	SS 01	Total/NA	Solid	5035	
890-6233-1 MSD	SS 01	Total/NA	Solid	5035	

## Analysis Batch: 74123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-1	SS 01	Total/NA	Solid	8021B	74049
890-6233-2	SS 02	Total/NA	Solid	8021B	74049
890-6233-3	SS 03	Total/NA	Solid	8021B	74049
890-6233-4	SS 04	Total/NA	Solid	8021B	74049
MB 880-74021/5-A	Method Blank	Total/NA	Solid	8021B	74021
MB 880-74049/5-A	Method Blank	Total/NA	Solid	8021B	74049
LCS 880-74049/1-A	Lab Control Sample	Total/NA	Solid	8021B	74049
LCSD 880-74049/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	74049
890-6233-1 MS	SS 01	Total/NA	Solid	8021B	74049
890-6233-1 MSD	SS 01	Total/NA	Solid	8021B	74049

## Analysis Batch: 74281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-1	SS 01	Total/NA	Solid	Total BTEX	
890-6233-2	SS 02	Total/NA	Solid	Total BTEX	
890-6233-3	SS 03	Total/NA	Solid	Total BTEX	
890-6233-4	SS 04	Total/NA	Solid	Total BTEX	

## GC Semi VOA

## Prep Batch: 74001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-1	SS 01	Total/NA	Solid	8015NM Prep	
890-6233-2	SS 02	Total/NA	Solid	8015NM Prep	
890-6233-3	SS 03	Total/NA	Solid	8015NM Prep	
890-6233-4	SS 04	Total/NA	Solid	8015NM Prep	
MB 880-74001/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-74001/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-74001/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6251-A-7-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6251-A-7-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 74025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-1	SS 01	Total/NA	Solid	8015B NM	74001

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QC Association Summary

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

GC Semi VOA (Continued)

Analysis Batch: 74025 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-2	SS 02	Total/NA	Solid	8015B NM	74001
890-6233-3	SS 03	Total/NA	Solid	8015B NM	74001
890-6233-4	SS 04	Total/NA	Solid	8015B NM	74001
MB 880-74001/1-A	Method Blank	Total/NA	Solid	8015B NM	74001
LCS 880-74001/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	74001
LCSD 880-74001/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	74001
890-6251-A-7-F MS	Matrix Spike	Total/NA	Solid	8015B NM	74001
890-6251-A-7-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	74001

Analysis Batch: 74183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-1	SS 01	Total/NA	Solid	8015 NM	
890-6233-2	SS 02	Total/NA	Solid	8015 NM	
890-6233-3	SS 03	Total/NA	Solid	8015 NM	
890-6233-4	SS 04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 73848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-1	SS 01	Soluble	Solid	DI Leach	
890-6233-2	SS 02	Soluble	Solid	DI Leach	
MB 880-73848/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-73848/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-73848/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6232-A-23-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-6232-A-23-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 73849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-3	SS 03	Soluble	Solid	DI Leach	
890-6233-4	SS 04	Soluble	Solid	DI Leach	
MB 880-73849/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-73849/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-73849/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6233-3 MS	SS 03	Soluble	Solid	DI Leach	
890-6233-3 MSD	SS 03	Soluble	Solid	DI Leach	

Analysis Batch: 73932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-1	SS 01	Soluble	Solid	300.0	73848
890-6233-2	SS 02	Soluble	Solid	300.0	73848
MB 880-73848/1-A	Method Blank	Soluble	Solid	300.0	73848
LCS 880-73848/2-A	Lab Control Sample	Soluble	Solid	300.0	73848
LCSD 880-73848/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	73848
890-6232-A-23-B MS	Matrix Spike	Soluble	Solid	300.0	73848
890-6232-A-23-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	73848

Analysis Batch: 73933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-3	SS 03	Soluble	Solid	300.0	73849

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QC Association Summary

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

HPLC/IC (Continued)

Analysis Batch: 73933 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6233-4	SS 04	Soluble	Solid	300.0	73849
MB 880-73849/1-A	Method Blank	Soluble	Solid	300.0	73849
LCS 880-73849/2-A	Lab Control Sample	Soluble	Solid	300.0	73849
LCSD 880-73849/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	73849
890-6233-3 MS	SS 03	Soluble	Solid	300.0	73849
890-6233-3 MSD	SS 03	Soluble	Solid	300.0	73849

Lab Chronicle

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Client Sample ID: SS 01

Date Collected: 02/20/24 09:05

Date Received: 02/21/24 11:50

Lab Sample ID: 890-6233-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74123	02/28/24 02:22	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74281	02/28/24 02:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			74183	02/27/24 00:23	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	74001	02/26/24 09:46	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74025	02/27/24 00:23	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	73848	02/22/24 12:27	SMC	EET MID
Soluble	Analysis	300.0		20			73932	02/25/24 17:11	CH	EET MID

Client Sample ID: SS 02

Date Collected: 02/20/24 09:10

Date Received: 02/21/24 11:50

Lab Sample ID: 890-6233-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74123	02/28/24 02:42	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74281	02/28/24 02:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			74183	02/27/24 00:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	74001	02/26/24 09:46	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74025	02/27/24 00:48	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	73848	02/22/24 12:27	SMC	EET MID
Soluble	Analysis	300.0		20			73932	02/25/24 17:16	CH	EET MID

Client Sample ID: SS 03

Date Collected: 02/20/24 09:15

Date Received: 02/21/24 11:50

Lab Sample ID: 890-6233-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74123	02/28/24 03:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74281	02/28/24 03:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			74183	02/27/24 01:12	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	74001	02/26/24 09:46	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74025	02/27/24 01:12	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	73849	02/22/24 12:30	SMC	EET MID
Soluble	Analysis	300.0		10			73933	02/25/24 17:53	CH	EET MID

Client Sample ID: SS 04

Date Collected: 02/20/24 09:20

Date Received: 02/21/24 11:50

Lab Sample ID: 890-6233-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	74049	02/26/24 13:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74123	02/28/24 03:23	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74281	02/28/24 03:23	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Client Sample ID: SS 04

Date Collected: 02/20/24 09:20

Date Received: 02/21/24 11:50

Lab Sample ID: 890-6233-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			74183	02/27/24 01:36	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	74001	02/26/24 09:46	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74025	02/27/24 01:36	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	73849	02/22/24 12:30	SMC	EET MID
Soluble	Analysis	300.0		10			73933	02/25/24 18:07	CH	EET MID

Laboratory References:  
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

**Protocol References:**

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum  
Project/Site: GOLDENCHILD BATTERY

Job ID: 890-6233-1  
SDG: 03C1558317

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6233-1	SS 01	Solid	02/20/24 09:05	02/21/24 11:50	0.5'
890-6233-2	SS 02	Solid	02/20/24 09:10	02/21/24 11:50	0.5'
890-6233-3	SS 03	Solid	02/20/24 09:15	02/21/24 11:50	0.5'
890-6233-4	SS 04	Solid	02/20/24 09:20	02/21/24 11:50	0.5'

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Environment Testing  
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300  
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334  
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1266  
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: \_\_\_\_\_

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Page 1 of 1

Project Manager:	Tacoma Monissey	Bill to: (if different)	Garett Green
Company Name:	Enselum, LLC	Company Name:	XTO Energy, Inc
Address:	3122 National Parks Hwy	Address:	3104 E Garces St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmonissey@enselum.com

Program:	UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting:	Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	Goldenshield Battery	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pres. Code	
Project Number:	D3C1558317	Due Date:			
Project Location:	32.15284, -104.01517	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	Meredith Roberts				
P.O. #:					
SAMPLE RECEIPT	Temp Blank: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Thermometer ID:	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Samples Received Intact:	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Temperature Reading:	0.6		
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Corrected Temperature:	0.4		
Total Containers:					

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	ANALYTIC DENIED
SS01	S	3/29/24	0905	0.5' G		1	BTEX	
SS02	S		0910			1	Chlorides	
SS03	S		0915			1	TPH	
SS04	S		0920			1		

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$65.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	3/29/24 11:30			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6233-1

SDG Number: 03C1558317

Login Number: 6233  
List Number: 1  
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6233-1

SDG Number: 03C1558317

Login Number: 6233  
List Number: 2  
Creator: Rodriguez, Leticia

List Source: Eurofins Midland  
List Creation: 02/22/24 11:22 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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**District II**  
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**District IV**  
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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

QUESTIONS  
  
Action 357545

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number:
	357545
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2400933895
Incident Name	NAPP2400933895 GOLDENCHILD BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Deferral Request Received

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Goldenchild Battery
Date Release Discovered	12/27/2023
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion   Other (Specify)   Produced Water   Released: 18 BBL   Recovered: 7 BBL   Lost: 11 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	A pinhole developed on a 6-inch Victaulic tee on the inlet line of the skim tank. -Corrosion

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**Santa Fe, NM 87505**

QUESTIONS, Page 2

Action 357545

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	357545
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	<b>No, according to supplied volumes this does not appear to be a "gas only" report.</b>
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	<b>No</b>
Reasons why this would be considered a submission for a notification of a major release	<i>Unavailable.</i>
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

**Initial Response**

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.*

The source of the release has been stopped	<b>True</b>
The impacted area has been secured to protect human health and the environment	<b>True</b>
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	<b>True</b>
All free liquids and recoverable materials have been removed and managed appropriately	<b>True</b>
If all the actions described above have not been undertaken, explain why	<i>Not answered.</i>

*Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.*

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.

I hereby agree and sign off to the above statement	Name: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 06/25/2024
--	--

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**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS, Page 3

Action 357545

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	357545
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS****Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	OCD Imaging Records Lookup
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1000 (ft.) and ½ (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1000 (ft.) and ½ (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

**Remediation Plan**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

**Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	336
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	39.8
GRO+DRO (EPA SW-846 Method 8015M)	39.8
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	04/25/2024
On what date will (or did) the final sampling or liner inspection occur	05/14/2024
On what date will (or was) the remediation complete(d)	06/06/2024
What is the estimated surface area (in square feet) that will be reclaimed	1615
What is the estimated volume (in cubic yards) that will be reclaimed	230
What is the estimated surface area (in square feet) that will be remediated	1215
What is the estimated volume (in cubic yards) that will be remediated	180

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.



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QUESTIONS, Page 4

Action 357545

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	357545
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 06/25/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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**District II**

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**District III**

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**District IV**

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

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Action 357545

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:	5380
	Action Number:	357545
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS****Deferral Requests Only**

Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.

Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	Surface Production Piping, electrical panels, electrical rails, LACT unit, production meter
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	400
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	50
Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	
Enter the facility ID (f#) on which this deferral should be granted	Goldenchild CTB [fAPP2126046644]
Enter the well API (30-) on which this deferral should be granted	Not answered.
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 06/25/2024

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QUESTIONS, Page 6  
  
Action 357545

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number:
	357545
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	356227
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	06/24/2024
What was the (estimated) number of samples that were to be gathered	2
What was the sampling surface area in square feet	400

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS  
  
Action 357545

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  357545
	Action Type:  [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
scwells	Deferral approved. Deferral of area demarcated by SW06, SW01 and SS07 shown on Figure 4 is approved until plugging and abandonment or a major facility deconstruction, whichever comes first. A complete and accurate remediation report and/or reclamation report will need to be submitted at that time.	7/10/2024