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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2224236187
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Garrett Green	Contact Telephone 575-200-0729
Contact email garrett.green@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 3104 E. Greene Street, Carlsbad, New Mexico, 88220	

Location of Release Source

Latitude 32.31651° Longitude -103.94173°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Nash Unit 36	Site Type Production Well
Date Release Discovered 08/17/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
K	12	23S	29E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 7.09	Volume Recovered (bbls) 5.76
☒ Produced Water	Volume Released (bbls) 51.99	Volume Recovered (bbls) 42.24
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Worn equipment caused the stuffing box to release fluids to well pad. A vacuum truck recovered all free fluids. A third-party contractor has been retained for remediation purposes.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2224236187
District RP	
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? A release greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by Jake Foust to ocd.enviro@state.nm.us, Mike Bratcher, and Robert Hamlet on 08/18/2022 via email.

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.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

NA

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

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.

Printed Name: Garrett Green
Title: SSHE Coordinator

Signature: 
Date: 8/29/2022

email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon
Date: 08/30/2022

Location:	Nash Unit 36	
Spill Date:	8/17/2022	
Area 1		
Approximate Area =	8297.00	sq. ft.
Average Saturation (or depth) of spill =	3.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	7.09	bbls
Total Produced Water =	51.99	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**7.09**	**bbls**
Total Produced Water =	**51.99**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**5.76**	**bbls**
Total Produced Water =	**42.24**	**bbls**

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

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 139363
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	8/31/2022

State of New Mexico
Oil Conservation Division

Incident ID	**NAPP2224236187**
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☒ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☒ Yes ☐ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	**NAPP2224236187**
District RP	
Facility ID	
Application ID	

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.

Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature:_  _____ Date: ____2/13/2023_____

email: _garrett.green@exxonmobil.com_____ Telephone: ____575-200-0729_____

OCD Only

Received by: _____Jocelyn Harimon_____ Date: ___02/13/2023____

Incident ID	**NAPP2224236187**
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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.

Printed Name: __ Garrett Green _____ Title: ____ Environmental Coordinator _____

Signature: __  _____ Date: __2/23/2023_____

email: ____ garrett.green@exxonmobil.com _____ Telephone: ___575-200-0729_____

OCD Only

Received by: Jocelyn Harimon Date: 02/13/2023

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2224236187
District RP	
Facility ID	
Application ID	

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Printed Name: __ Garrett Green _____ Title: ____ Environmental Coordinator _____

Signature: __ Garrett Green _____ Date: __2/23/2023_____

email: ____ garrett.green@exxonmobil.com _____ Telephone: ___575-200-0729_____

OCD Only

Received by: Jocelyn Harimon Date: 02/13/2023

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Robert Hamlet Date: 6/14/2023

ENSOLUM

February 13, 2023

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

Re: Remediation Work Plan
Nash Unit 36
Incident Number NAPP2224236187
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Remediation Work Plan* (*Work Plan*) to document the site assessment activities completed to date and propose a work plan to address impacted soil identified at the Nash Unit 36 (Site). The purpose of the site assessment activities was to delineate the extent of impacted soil resulting from a release of crude oil and produced water at the Site and to assess background chloride concentrations due to the proximity to a salt lake. The following *Work Plan* documents naturally occuring chloride concentrations comparable to those observed within the release extent and proposes excavation of hydrocarbon-impacted soil within the top 1 foot to 2 feet of the release extent.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit K, Section 12, Township 23 South, Range 29 East, in Eddy County, New Mexico (32.31651°, -103.94173°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On August 17, 2022, worn equipment caused the stuffing box to release 7.09 barrels (bbls) of crude oil and 51.99 bbls produced water onto the well pad surface. A vacuum truck was dispatched to the Site and recovered approximately 5.76 bbls of crude oil and 42.24 bbls of produced water. XTO immediately reported the release to the NMOCD via email on August 18, 2022 and submitted a Release Notification Form C-141 (Form C-141) on August 29, 2022. The release was assigned Incident Number nAPP2224236187.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of 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 on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-4594, located approximately 0.78 miles southeast of the Site. The groundwater well has a reported depth to groundwater of 27 feet bgs and a total depth

of 38 feet bgs. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a salt lake, located approximately 120 feet north and west of the Site. The Site is within 200 feet from a lakebed, sinkhole, or playa lake but 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 underlain by unstable geology (high 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 AND DELINEATION ACTIVITIES

On September 28, 2022, Ensolum personnel conducted a site visit to evaluate the release extent based on information provided on the Form C-141 and visual observations. Ensolum personnel collected five soil samples (SS01 through SS05) within the release extent from a depth of 0.5 feet bgs. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed 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 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

On November 18, 2022, Ensolum personnel returned to the Site to complete additional delineation to assess the vertical extent of soil impacts and to investigate naturally occurring chloride concentrations in the area. Delination pothole PH01 was advanced near SS04 within the release extent. Delineation potholes PH02 through PH06, collected in as near as possible to the release but in undisturbed areas around the well pad, were advanced via backhoe to a maximum depth of 4 feet bgs. Discrete soil samples were collected from each pothole at depths ranging from 1-foot bgs to 4 feet bgs. Soil from the potholes was field screened for VOCs and chloride. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix C. The soil samples were handled and analyzed as described above at Eurofins in Carlsbad, New Mexico. The soil sample locations are depicted on Figure 2.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all soil samples soil samples collected within the release extent, except for SS04, contained TPH concentrations exceeding the Closure Criteria. Chloride concentrations exceeding 600 mg/kg were not detected in surface samples. The chloride concentration in soil sample PH01A, collected from 2 feet bgs within the release extent, was 1,240 mg/kg.

Laboratory analytical results for the delineation soil samples collected in undisturbed areas outside of the well pad indicated that chloride concentrations range from 3,050 mg/kg in PH02A to 14,600 mg/kg in PH004. Laboratory Analytical Reports & Chain-of-Custody Documentation are presented in Appendix D. NMOCD notifications are presented in Appendix E.

PROPOSED REMEDIATION WORK PLAN

The delineation soil sampling results indicate naturally occurring elevated chloride concentrations are present in undisturbed soils, likely a result of the proximal salt lake. Based on these analytical results, XTO proposes a background chloride concentration of 14,600 mg/kg, which rules out chloride as a constituent of concern (COC) for this release.

Hydrocarbon-impacted soil was identified within the release extent and XTO proposes the following remediation activities:

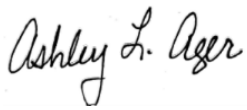
- Excavation of impacted soil to a depth of approximately 2 feet bgs.
- Excavation will proceed until confirmation soil samples confirm benzene and TPH concentrations are compliant with the Closure Criteria. Confirmation soil samples will be 5-point composite samples representing at most 200 square feet in area. Samples will be collected from the floor and sidewalls of the excavation. Confirmation samples will be analyzed for benzene and TPH only.
- An estimated 730 cubic yards of impacted soil will be excavated. The excavated soil will be transported and disposed of at a New Mexico approved landfill facility for disposal.
- The excavation will be backfilled and recontoured to match pre-existing conditions.

XTO will complete the excavation and soil sampling activities within 90 days of the date of approval of this Work Plan by the NMOCD.

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

Sincerely,
Ensolum, LLC

Tacoma Morrissey, MS
Senior Geologist



Ashley Ager, PG, MS
Program Director

cc: Garrett Green, XTO
Shelby Pennington, XTO
BLM

Appendices:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications

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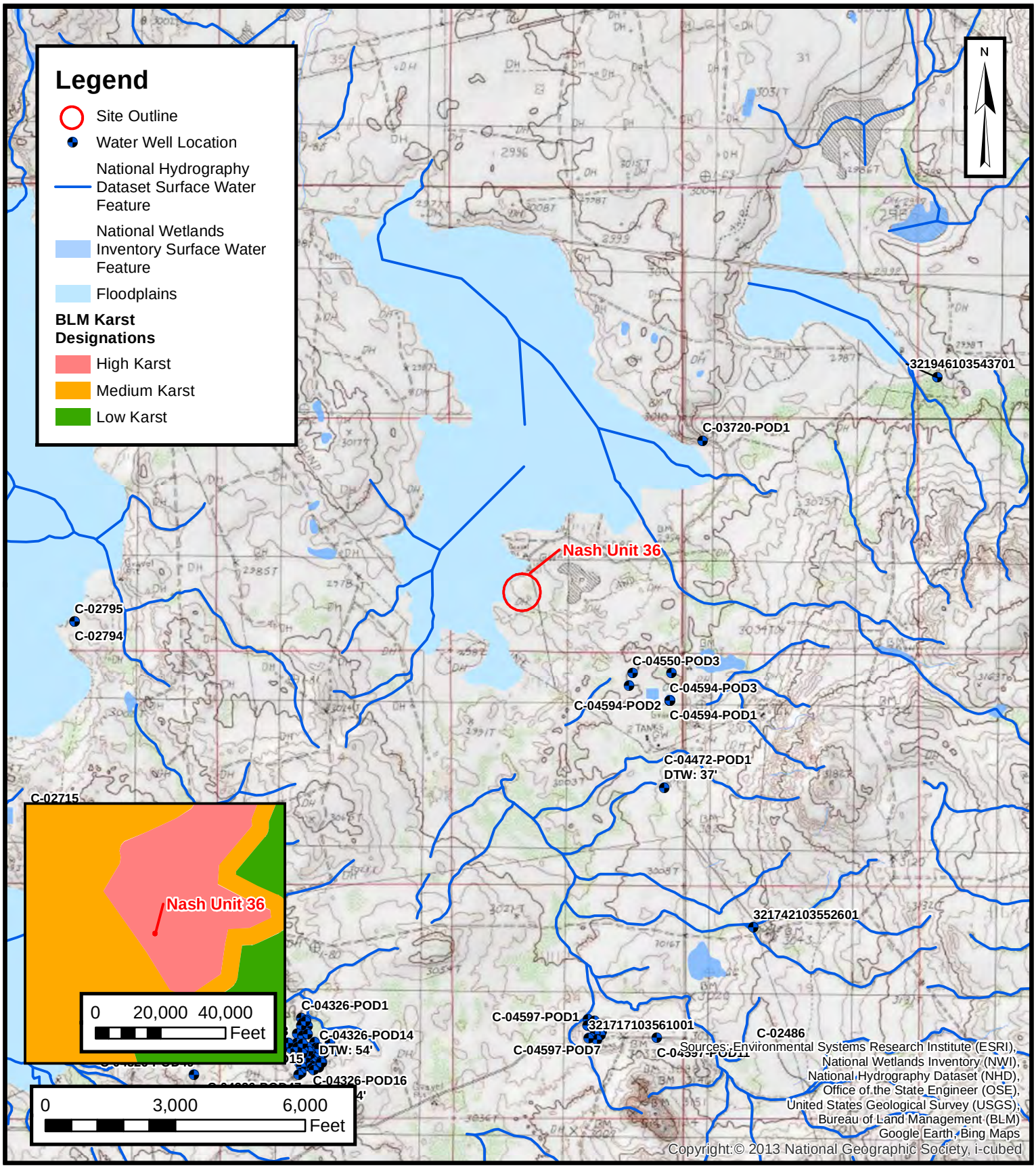
FIGURES

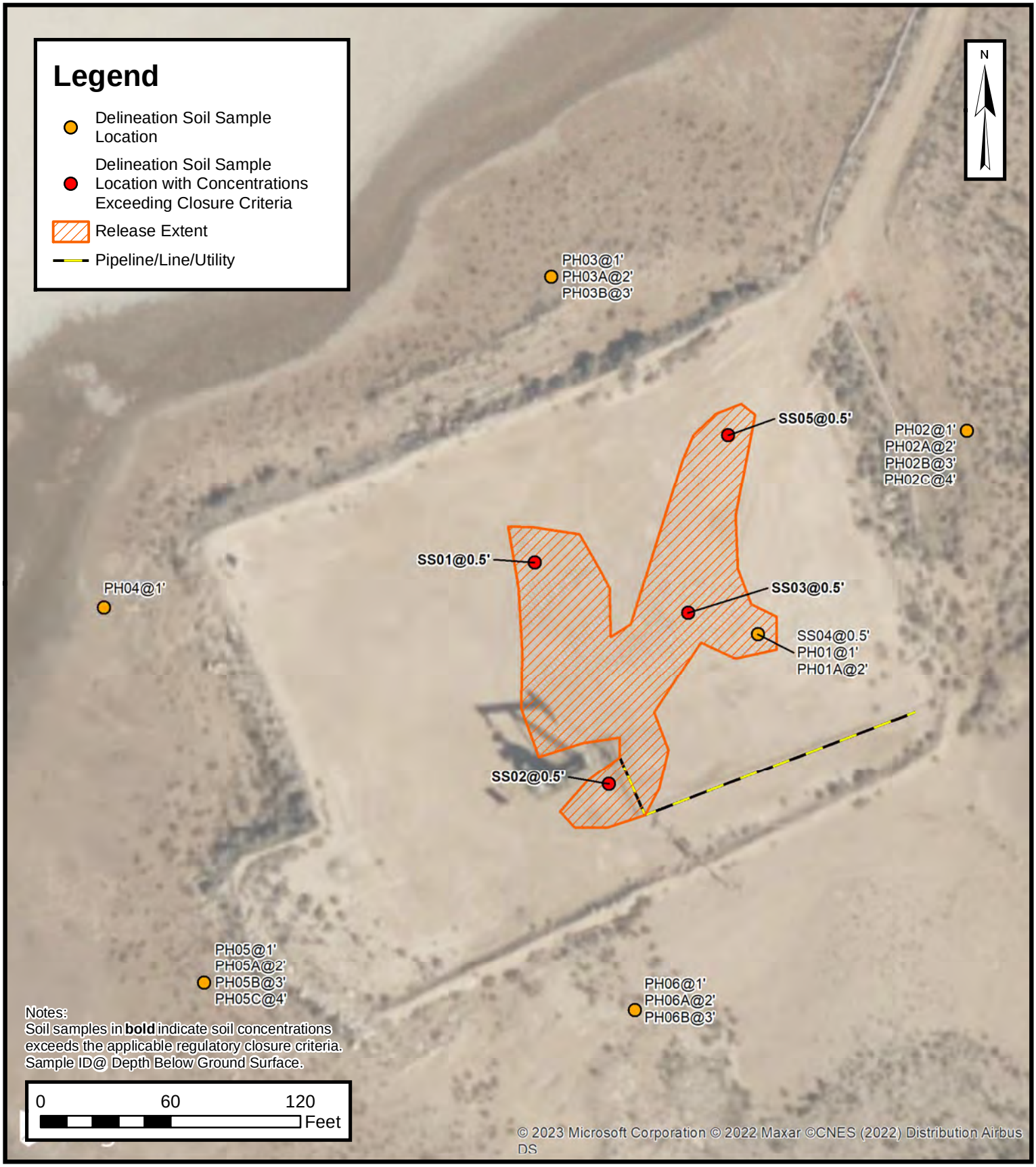


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Nash Unit 36
NAPP2224236187
Unit K, Sec 12, T23S, R29E
Eddy County, New Mexico

FIGURE
1



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
Nash Unit 36
NAPP2224236187
Unit K, Sec 12, T23S, R29E
Eddy County, New Mexico

FIGURE
2

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TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Nash Unit 36
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 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
									Maximum Naturally Occurring Chloride Concentration	14,600
Delineation Soil Samples										
SS01	09/28/2022	0.5	<0.00201	<0.00402	<250	18,700	3,280	18,700	**22,000**	312
SS02	09/28/2022	0.5	<0.00198	<0.00396	<249	15,300	2,360	15,300	**17,700**	119
SS03	09/28/2022	0.5	<0.00199	0.0964	<250	9,120	1,670	9,120	**10,800**	208
SS04	09/28/2022	0.5	<0.00200	<0.00399	<49.9	68.1	<49.9	68.1	68.1	145
SS05	09/28/2022	0.5	<0.00199	<0.00398	<250	12,200	1,860	12,200	**14,100**	128
PH01	11/18/2022	1	NA	NA	NA	NA	NA	NA	NA	476
PH01A	11/18/2022	2	NA	NA	NA	NA	NA	NA	NA	1,240
PH02	11/18/2022	1	NA	NA	NA	NA	NA	NA	NA	4,430
PH02A	11/18/2022	2	NA	NA	NA	NA	NA	NA	NA	3,050
PH02B	11/18/2022	3	NA	NA	NA	NA	NA	NA	NA	6,460
PH02C	11/18/2022	4	NA	NA	NA	NA	NA	NA	NA	4,860
PH03	11/18/2022	1	NA	NA	NA	NA	NA	NA	NA	7,870
PH03A	11/18/2022	2	NA	NA	NA	NA	NA	NA	NA	7,520
PH03B	11/18/2022	3	NA	NA	NA	NA	NA	NA	NA	4,730
PH04	11/18/2022	1	NA	NA	NA	NA	NA	NA	NA	14,600
PH05	11/18/2022	1	NA	NA	NA	NA	NA	NA	NA	10,100
PH05A	11/18/2022	2	NA	NA	NA	NA	NA	NA	NA	5,160
PH05B	11/18/2022	3	NA	NA	NA	NA	NA	NA	NA	7,330
PH05C	11/18/2022	4	NA	NA	NA	NA	NA	NA	NA	7,650
PH06	11/18/2022	1	NA	NA	NA	NA	NA	NA	NA	3,440
PH06A	11/18/2022	2	NA	NA	NA	NA	NA	NA	NA	4,410
PH06B	11/18/2022	3	NA	NA	NA	NA	NA	NA	NA	4,110

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 1 Closure Criteria or reclamation standard where applicable.
Grey text indicate soil sample removed during excavation activities
** indicates soil in the top 4 feet of pasture to be reclaimed*

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
NA: Not Analyzed

ENSOLUM

APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DII MAR 30 2022 AM8:55

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD3 (BH-7)	n/a	C-4594

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy , Inc. attn:Adrian Baker	(432)-236-3808

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	Texas	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	18	35.37	N
	LONGITUDE	103	55	51.18	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

SE NE Sec. 13 T23S R29E, NMPM

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
2/21/2022	2/21/2022	38	±38	27

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 27

DATE STATIC MEASURED: 2/21/22

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	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)
0	28	±6.5	2" SCH 40 PVC Riser	Flush Thread 2 TPI	2.067	0.154	--
28	38	±6.5	2" SCH 40 PVC Screen	Flush Thread 2 TPI	2.067	0.154	0.010

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.	C-4594	POD NO.	POD3	TRN NO.	719122
LOCATION	23S 29E 13	4.2.2		WELL TAG ID NO.	NA

PAGE 1 OF 2

OSE OIL MAR 30 2022 AM8:56

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	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)
0	7	7	CALICHE, Dry, tan-light brown, well to moderately consolidated abundant fine-	Y ✓ N	
7	37	30	DOLOMITE, Dry, light grey-grey, trace dissolution features (1-3mm) microcrys	✓ Y N	
37	38	1	CLAY, Dry, light grey high plasticity, cohesive, some orange reddish brown	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				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:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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: 2" temporary well material in boring sealed with bentonite and metal plate to ground surface.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Cameron Pruitt

6. SIGNATURE

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:

Jack Atkins — Jackie D. Atkins — 3/29/2022

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO. C-4594	POD NO. POD3	TRN NO. 719122	
LOCATION 23S 29E 13 4.2.2		WELL TAG ID NO. NA	PAGE 2 OF 2

ENSOLUM

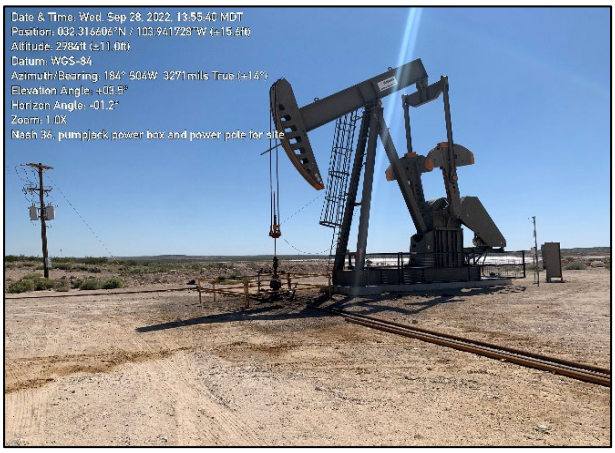
APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
Nash Unit 36
Incident Number NAPP2224236187

Photograph: 1 Date: 8/18/2022
Description: Soil staining in release footprint
View: Northwest



Photograph: 2 Date: 9/28/2022
Description: Soil staining in release footprint
View: Southwest

Photograph: 3 Date: 11/18/2022
Description: Location of PH03 and proximity to salt lake
View: Northwest

Photograph: 4 Date: 11/18/2022
Description: Delineation activities at PH04
View: Northwest

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM	Sample Name: PH01	Date: 11/18/22
	Site Name: Nash Unit 36	
	Incident Number: nAPP2224236187	
	Job Number: 03C1558117	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Backhoe
Coordinates: 32.31651,-103.94173	Hole Diameter: ~3'	Total Depth: 2'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M		0	N	PH01		1	SP	Very fine, red sand
M		0	N	PH01A		2	SW	Very fine, red sand/caliche

ENSOLUM	Sample Name: PH02	Date: 11/18/22
	Site Name: Nash Unit 36	
	Incident Number: nAPP2224236187	
	Job Number: 03C1558117	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Backhoe
Coordinates: 32.31651,-103.94173	Hole Diameter: ~3'	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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	8,164	0	N	PH02		1	SP	Very fine, red silty sand
M	5,499	0	N	PH02A		2	SP	Very fine, red silty sand
M	11,110	0	N	PH02B		3	SW	Clayey caliche
M	6,988	0	N	PH02C		4	SP	Very fine, red sand/calyey caliche
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name: PH03	Date: 11/18/22
	Site Name: Nash Unit 36	
	Incident Number: nAPP2224236187	
	Job Number: 03C1558117	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Backhoe
Coordinates: 32.31651,-103.94173	Hole Diameter: ~3'	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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	9,290	0	N	PH03		1	SW	Fine brown sand/silty caliche
M	6,776	0	N	PH03A		2	SW	Fine brown sand/silty caliche
M	7,341	0	N	PH03B		3	SW	Clayey gravel
						4		Saturated Soil
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name: PH04	Date: 11/18/22
	Site Name: Nash Unit 36	
	Incident Number: nAPP2224236187	
	Job Number: 03C1558117	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Backhoe
Coordinates: 32.31651,-103.94173	Hole Diameter: ~3'	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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	28,817	0	N	PH04		0 1 2 3 4 5 6 7 8 9 10 11 12	SP	Very fine brown sand/silty caliche Saturated Soil

ENSOLUM	Sample Name: PH05	Date: 11/18/22
	Site Name: Nash Unit 36	
	Incident Number: nAPP2224236187	
	Job Number: 03C1558117	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Backhoe
Coordinates: 32.31651,-103.94173	Hole Diameter: ~3'	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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	8,820	0.2	N	PH05		1	SP	Very fine brown sand/caliche
M	15,265	0.2	N	PH05A		2	CCHE	Clayey caliche
M	9,520	0.2	N	PH05B		3	CCHE	Clayey caliche
M	8,820	0.2		PH05C		4	CCHE	Clayey caliche
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name: PH06	Date: 11/18/22
	Site Name: Nash Unit 36	
	Incident Number: nAPP2224236187	
	Job Number: 03C1558117	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Connor Whitman	Method: Backhoe
Coordinates: 32.31651,-103.94173	Hole Diameter: ~3'	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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	5,964	0.1	N	PH06		1	SP	Very fine brown sand/caliche
M	5,964	0	N	PH06A		2	SP	Very fine brown sand/caliche
M	5,964	0	N	PH06B		3	SP	Very fine brown sand/caliche

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-3106-1
Laboratory Sample Delivery Group: 03E1558117
Client Project/Site: NASH UNIT 36

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
10/11/2022 4:18:13 PM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: NASH UNIT 36

Laboratory Job ID: 890-3106-1
SDG: 03E1558117

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery 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
F1	MS and/or MSD recovery exceeds control limits.
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.
¤	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)

Definitions/Glossary

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Job ID: 890-3106-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3106-1

Receipt
The samples were received on 9/29/2022 8:35 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 1.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-36450 and analytical batch 880-36624 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: o-Xylene biased high in LCSD. Since only an acceptable LCS is required per the method, the data has been qualified and reported.(LCSD 880-36450/2-A)

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: Surrogate recovery for the following samples were outside control limits: (890-3104-A-1-B MS) and (890-3104-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-3106-1), SS02 (890-3106-2), SS03 (890-3106-3) and SS05 (890-3106-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-35819 and analytical batch 880-35738 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-35819 and analytical batch 880-35738 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-36006 and analytical batch 880-36264 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Client Sample ID: SS01

Lab Sample ID: 890-3106-1
Matrix: Solid
Date Collected: 09/28/22 14:00
Date Received: 09/29/22 08:35
Sample Depth: 0.5

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		10/08/22 13:26	10/11/22 14:10	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/08/22 13:26	10/11/22 14:10	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/08/22 13:26	10/11/22 14:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/08/22 13:26	10/11/22 14:10	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		10/08/22 13:26	10/11/22 14:10	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/08/22 13:26	10/11/22 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*10/08/22 13:26*	*10/11/22 14:10*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*10/08/22 13:26*	*10/11/22 14:10*	*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			10/11/22 15:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**22000**		250		mg/Kg			10/03/22 11:45	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	<250	U *1	250		mg/Kg		09/30/22 14:01	10/01/22 03:02	5
Diesel Range Organics (Over C10-C28)	**18700**		250		mg/Kg		09/30/22 14:01	10/01/22 03:02	5
OII Range Organics (Over C28-C36)	**3280**		250		mg/Kg		09/30/22 14:01	10/01/22 03:02	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*09/30/22 14:01*	*10/01/22 03:02*	*5*
o-Terphenyl	*434*	*S1+*	*70 - 130*	*09/30/22 14:01*	*10/01/22 03:02*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**312**		4.98		mg/Kg			10/06/22 12:25	1

Client Sample ID: SS02

Lab Sample ID: 890-3106-2
Matrix: Solid
Date Collected: 09/28/22 14:05
Date Received: 09/29/22 08:35
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		10/08/22 13:26	10/11/22 15:32	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/08/22 13:26	10/11/22 15:32	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/08/22 13:26	10/11/22 15:32	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		10/08/22 13:26	10/11/22 15:32	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		10/08/22 13:26	10/11/22 15:32	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		10/08/22 13:26	10/11/22 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*10/08/22 13:26*	*10/11/22 15:32*	*1*

Client Sample Results

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Client Sample ID: SS02

Lab Sample ID: 890-3106-2
Matrix: Solid
Date Collected: 09/28/22 14:05
Date Received: 09/29/22 08:35
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*10/08/22 13:26*	*10/11/22 15:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			10/11/22 15:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**17700**		249	mg/Kg			10/03/22 11:45	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	<249	U *1	249	mg/Kg		09/30/22 14:01	10/01/22 03:24	5
Diesel Range Organics (Over C10-C28)	**15300**		249	mg/Kg		09/30/22 14:01	10/01/22 03:24	5
OII Range Organics (Over C28-C36)	**2360**		249	mg/Kg		09/30/22 14:01	10/01/22 03:24	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*09/30/22 14:01*	*10/01/22 03:24*	*5*
o-Terphenyl	*292*	*S1+*	*70 - 130*	*09/30/22 14:01*	*10/01/22 03:24*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**119**		5.05	mg/Kg			10/06/22 12:31	1

Client Sample ID: SS03

Lab Sample ID: 890-3106-3
Matrix: Solid
Date Collected: 09/28/22 14:15
Date Received: 09/29/22 08:35
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		10/08/22 13:26	10/11/22 15:53	1
Toluene	**0.0192**		0.00199	mg/Kg		10/08/22 13:26	10/11/22 15:53	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/08/22 13:26	10/11/22 15:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/08/22 13:26	10/11/22 15:53	1
o-Xylene	**0.0772**	*+	0.00199	mg/Kg		10/08/22 13:26	10/11/22 15:53	1
Xylenes, Total	**0.0772**		0.00398	mg/Kg		10/08/22 13:26	10/11/22 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*10/08/22 13:26*	*10/11/22 15:53*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*10/08/22 13:26*	*10/11/22 15:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0964**		0.00398	mg/Kg			10/11/22 15:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**10800**		250	mg/Kg			10/03/22 11:45	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Client Sample ID: SS03

Lab Sample ID: 890-3106-3
Matrix: Solid
Date Collected: 09/28/22 14:15
Date Received: 09/29/22 08:35
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	<250	U *1	250		mg/Kg		09/30/22 14:01	10/01/22 03:45	5
Diesel Range Organics (Over C10-C28)	**9120**		250		mg/Kg		09/30/22 14:01	10/01/22 03:45	5
OII Range Organics (Over C28-C36)	**1670**		250		mg/Kg		09/30/22 14:01	10/01/22 03:45	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/30/22 14:01*	*10/01/22 03:45*	*5*
o-Terphenyl	*193*	*S1+*	*70 - 130*	*09/30/22 14:01*	*10/01/22 03:45*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**208**		4.96		mg/Kg			10/06/22 12:48	1

Client Sample ID: SS04

Lab Sample ID: 890-3106-4
Matrix: Solid
Date Collected: 09/28/22 14:20
Date Received: 09/29/22 08:35
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/08/22 13:26	10/11/22 16:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/08/22 13:26	10/11/22 16:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/08/22 13:26	10/11/22 16:13	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/08/22 13:26	10/11/22 16:13	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		10/08/22 13:26	10/11/22 16:13	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/08/22 13:26	10/11/22 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*10/08/22 13:26*	*10/11/22 16:13*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*10/08/22 13:26*	*10/11/22 16:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/11/22 15:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**68.1**		49.9		mg/Kg			10/03/22 11:45	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	<49.9	U *1	49.9		mg/Kg		09/30/22 14:01	10/01/22 02:41	1
Diesel Range Organics (Over C10-C28)	**68.1**		49.9		mg/Kg		09/30/22 14:01	10/01/22 02:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/30/22 14:01	10/01/22 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/30/22 14:01*	*10/01/22 02:41*	*1*
o-Terphenyl	*94*		*70 - 130*	*09/30/22 14:01*	*10/01/22 02:41*	*1*

Client Sample Results

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Client Sample ID: SS04

Lab Sample ID: 890-3106-4
Matrix: Solid
Date Collected: 09/28/22 14:20
Date Received: 09/29/22 08:35
Sample Depth: 0.5

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	145		4.98		mg/Kg			10/06/22 12:54	1

Client Sample ID: SS05

Lab Sample ID: 890-3106-5
Matrix: Solid
Date Collected: 09/28/22 14:25
Date Received: 09/29/22 08:35
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		10/08/22 13:26	10/11/22 16:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/08/22 13:26	10/11/22 16:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/08/22 13:26	10/11/22 16:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/08/22 13:26	10/11/22 16:34	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		10/08/22 13:26	10/11/22 16:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/08/22 13:26	10/11/22 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*10/08/22 13:26*	*10/11/22 16:34*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*10/08/22 13:26*	*10/11/22 16:34*	*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			10/11/22 15:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	14100		250		mg/Kg			10/03/22 11:45	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	<250	U *1	250		mg/Kg		09/30/22 14:01	10/01/22 04:07	5
Diesel Range Organics (Over C10-C28)	12200		250		mg/Kg		09/30/22 14:01	10/01/22 04:07	5
OII Range Organics (Over C28-C36)	1860		250		mg/Kg		09/30/22 14:01	10/01/22 04:07	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*09/30/22 14:01*	*10/01/22 04:07*	*5*
o-Terphenyl	*239*	*S1+*	*70 - 130*	*09/30/22 14:01*	*10/01/22 04:07*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	128		4.99		mg/Kg			10/06/22 13:00	1

Surrogate Summary

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

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)
890-3105-A-1-C MS	Matrix Spike	85	101
890-3105-A-1-D MSD	Matrix Spike Duplicate	82	100
890-3106-1	SS01	73	97
890-3106-2	SS02	76	85
890-3106-3	SS03	79	71
890-3106-4	SS04	83	72
890-3106-5	SS05	66 S1-	103
LCS 880-36450/1-A	Lab Control Sample	111	99
LCSD 880-36450/2-A	Lab Control Sample Dup	122	106
MB 880-36450/5-A	Method Blank	88	91

Surrogate Legend

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)
890-3104-A-1-B MS	Matrix Spike	69 S1-	61 S1-
890-3104-A-1-C MSD	Matrix Spike Duplicate	71	61 S1-
890-3106-1	SS01	79	434 S1+
890-3106-2	SS02	109	292 S1+
890-3106-3	SS03	93	193 S1+
890-3106-4	SS04	93	94
890-3106-5	SS05	108	239 S1+
LCS 880-35819/2-A	Lab Control Sample	106	110
LCSD 880-35819/3-A	Lab Control Sample Dup	94	98
MB 880-35819/1-A	Method Blank	108	116

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36450/5-A
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36450

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/08/22 13:26	10/11/22 10:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/08/22 13:26	10/11/22 10:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/08/22 13:26	10/11/22 10:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/08/22 13:26	10/11/22 10:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/08/22 13:26	10/11/22 10:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/08/22 13:26	10/11/22 10:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*10/08/22 13:26*	*10/11/22 10:43*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*10/08/22 13:26*	*10/11/22 10:43*	*1*

Lab Sample ID: LCS 880-36450/1-A
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36450

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08634		mg/Kg		86	70 - 130		
Toluene			0.100	0.08646		mg/Kg		86	70 - 130		
Ethylbenzene			0.100	0.08708		mg/Kg		87	70 - 130		
m-Xylene & p-Xylene			0.200	0.1903		mg/Kg		95	70 - 130		
o-Xylene			0.100	0.1090		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-36450/2-A
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36450

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09637		mg/Kg		96	70 - 130	11	35
Toluene			0.100	0.09772		mg/Kg		98	70 - 130	12	35
Ethylbenzene			0.100	0.1077		mg/Kg		108	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.2381		mg/Kg		119	70 - 130	22	35
o-Xylene			0.100	0.1334	*+	mg/Kg		133	70 - 130	20	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-3105-A-1-C MS
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 36450

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F1 F2	0.0998	0.01209	F1	mg/Kg		12	70 - 130		
Toluene	<0.00202	U F1 F2	0.0998	0.007769	F1	mg/Kg		8	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

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

Lab Sample ID: 890-3105-A-1-C MS
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 36450

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U F1 F2	0.0998	0.008280	F1	mg/Kg		8	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1 F2	0.200	0.01613	F1	mg/Kg		8	70 - 130
o-Xylene	<0.00202	U *+ F1 F2	0.0998	0.01470	F1	mg/Kg		15	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-3105-A-1-D MSD
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 36450

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1 F2	0.0996	0.003787	F1 F2	mg/Kg		4	70 - 130	105	35
Toluene	<0.00202	U F1 F2	0.0996	0.002329	F1 F2	mg/Kg		2	70 - 130	108	35
Ethylbenzene	<0.00202	U F1 F2	0.0996	0.002969	F1 F2	mg/Kg		3	70 - 130	94	35
m-Xylene & p-Xylene	<0.00403	U F1 F2	0.199	0.006455	F1 F2	mg/Kg		3	70 - 130	86	35
o-Xylene	<0.00202	U *+ F1 F2	0.0996	0.004802	F1 F2	mg/Kg		5	70 - 130	102	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 880-35819/1-A
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35819

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/30/22 14:01	09/30/22 19:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/30/22 14:01	09/30/22 19:10	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/30/22 14:01	09/30/22 19:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*09/30/22 14:01*	*09/30/22 19:10*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/30/22 14:01*	*09/30/22 19:10*	*1*

Lab Sample ID: LCS 880-35819/2-A
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35819

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1130		mg/Kg		113	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

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

Lab Sample ID: LCS 880-35819/2-A
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35819

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics (Over C10-C28)			1000	983.8		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: LCSD 880-35819/3-A
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35819

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	805.1	*1	mg/Kg		81	70 - 130	34	20
Diesel Range Organics (Over C10-C28)			1000	871.5		mg/Kg		87	70 - 130	12	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: 890-3104-A-1-B MS
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 35819

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	998	887.3		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)	563	F1	998	954.4	F1	mg/Kg		39	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*69*	*S1-*	*70 - 130*
o-Terphenyl	*61*	*S1-*	*70 - 130*

Lab Sample ID: 890-3104-A-1-C MSD
Matrix: Solid
Analysis Batch: 35738

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 35819

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	999	976.8		mg/Kg		96	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	563	F1	999	983.3	F1	mg/Kg		42	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*71*		*70 - 130*
o-Terphenyl	*61*	*S1-*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-36006/1-A
Matrix: Solid
Analysis Batch: 36264

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			10/06/22 11:38	1

Lab Sample ID: LCS 880-36006/2-A
Matrix: Solid
Analysis Batch: 36264

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	241.3		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-36006/3-A
Matrix: Solid
Analysis Batch: 36264

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	258.0		mg/Kg		103	90 - 110	7	20

Lab Sample ID: 880-19869-A-1-B MS
Matrix: Solid
Analysis Batch: 36264

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	840	F1	250	1090		mg/Kg		100	90 - 110		

Lab Sample ID: 880-19869-A-1-C MSD
Matrix: Solid
Analysis Batch: 36264

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	840	F1	250	1025	F1	mg/Kg		74	90 - 110	6	20

QC Association Summary

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

GC VOA

Prep Batch: 36450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3106-1	SS01	Total/NA	Solid	5035	
890-3106-2	SS02	Total/NA	Solid	5035	
890-3106-3	SS03	Total/NA	Solid	5035	
890-3106-4	SS04	Total/NA	Solid	5035	
890-3106-5	SS05	Total/NA	Solid	5035	
MB 880-36450/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36450/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36450/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3105-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3105-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 36624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3106-1	SS01	Total/NA	Solid	8021B	36450
890-3106-2	SS02	Total/NA	Solid	8021B	36450
890-3106-3	SS03	Total/NA	Solid	8021B	36450
890-3106-4	SS04	Total/NA	Solid	8021B	36450
890-3106-5	SS05	Total/NA	Solid	8021B	36450
MB 880-36450/5-A	Method Blank	Total/NA	Solid	8021B	36450
LCS 880-36450/1-A	Lab Control Sample	Total/NA	Solid	8021B	36450
LCSD 880-36450/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36450
890-3105-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	36450
890-3105-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	36450

Analysis Batch: 36692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3106-1	SS01	Total/NA	Solid	Total BTEX	
890-3106-2	SS02	Total/NA	Solid	Total BTEX	
890-3106-3	SS03	Total/NA	Solid	Total BTEX	
890-3106-4	SS04	Total/NA	Solid	Total BTEX	
890-3106-5	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 35738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3106-1	SS01	Total/NA	Solid	8015B NM	35819
890-3106-2	SS02	Total/NA	Solid	8015B NM	35819
890-3106-3	SS03	Total/NA	Solid	8015B NM	35819
890-3106-4	SS04	Total/NA	Solid	8015B NM	35819
890-3106-5	SS05	Total/NA	Solid	8015B NM	35819
MB 880-35819/1-A	Method Blank	Total/NA	Solid	8015B NM	35819
LCS 880-35819/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	35819
LCSD 880-35819/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	35819
890-3104-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	35819
890-3104-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	35819

Prep Batch: 35819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3106-1	SS01	Total/NA	Solid	8015NM Prep	
890-3106-2	SS02	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

GC Semi VOA (Continued)

Prep Batch: 35819 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3106-3	SS03	Total/NA	Solid	8015NM Prep	
890-3106-4	SS04	Total/NA	Solid	8015NM Prep	
890-3106-5	SS05	Total/NA	Solid	8015NM Prep	
MB 880-35819/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-35819/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-35819/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3104-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3104-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 35983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3106-1	SS01	Total/NA	Solid	8015 NM	
890-3106-2	SS02	Total/NA	Solid	8015 NM	
890-3106-3	SS03	Total/NA	Solid	8015 NM	
890-3106-4	SS04	Total/NA	Solid	8015 NM	
890-3106-5	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 36006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3106-1	SS01	Soluble	Solid	DI Leach	
890-3106-2	SS02	Soluble	Solid	DI Leach	
890-3106-3	SS03	Soluble	Solid	DI Leach	
890-3106-4	SS04	Soluble	Solid	DI Leach	
890-3106-5	SS05	Soluble	Solid	DI Leach	
MB 880-36006/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36006/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36006/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-19869-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19869-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 36264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3106-1	SS01	Soluble	Solid	300.0	36006
890-3106-2	SS02	Soluble	Solid	300.0	36006
890-3106-3	SS03	Soluble	Solid	300.0	36006
890-3106-4	SS04	Soluble	Solid	300.0	36006
890-3106-5	SS05	Soluble	Solid	300.0	36006
MB 880-36006/1-A	Method Blank	Soluble	Solid	300.0	36006
LCS 880-36006/2-A	Lab Control Sample	Soluble	Solid	300.0	36006
LCSD 880-36006/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36006
880-19869-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	36006
880-19869-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	36006

Lab Chronicle

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Client Sample ID: SS01
Date Collected: 09/28/22 14:00
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3106-1
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			4.97 g	5 mL	36450	10/08/22 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36624	10/11/22 14:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36692	10/11/22 15:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			35983	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35819	09/30/22 14:01	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	35738	10/01/22 03:02	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 12:25	CH	EET MID

Client Sample ID: SS02
Date Collected: 09/28/22 14:05
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3106-2
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			5.05 g	5 mL	36450	10/08/22 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36624	10/11/22 15:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36692	10/11/22 15:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			35983	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	35819	09/30/22 14:01	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	35738	10/01/22 03:24	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 12:31	CH	EET MID

Client Sample ID: SS03
Date Collected: 09/28/22 14:15
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3106-3
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			5.03 g	5 mL	36450	10/08/22 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36624	10/11/22 15:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36692	10/11/22 15:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			35983	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35819	09/30/22 14:01	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	35738	10/01/22 03:45	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 12:48	CH	EET MID

Client Sample ID: SS04
Date Collected: 09/28/22 14:20
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3106-4
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			5.01 g	5 mL	36450	10/08/22 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36624	10/11/22 16:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36692	10/11/22 15:00	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Client Sample ID: SS04

Date Collected: 09/28/22 14:20
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3106-4

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			35983	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35819	09/30/22 14:01	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35738	10/01/22 02:41	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 12:54	CH	EET MID

Client Sample ID: SS05

Date Collected: 09/28/22 14:25
Date Received: 09/29/22 08:35

Lab Sample ID: 890-3106-5

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	36450	10/08/22 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36624	10/11/22 16:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36692	10/11/22 15:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			35983	10/03/22 11:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35819	09/30/22 14:01	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	35738	10/01/22 04:07	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 13:00	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

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	T104704400-22-24	06-30-23

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: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

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	MCAWW	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

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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: NASH UNIT 36

Job ID: 890-3106-1
SDG: 03E1558117

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3106-1	SS01	Solid	09/28/22 14:00	09/29/22 08:35	0.5
890-3106-2	SS02	Solid	09/28/22 14:05	09/29/22 08:35	0.5
890-3106-3	SS03	Solid	09/28/22 14:15	09/29/22 08:35	0.5
890-3106-4	SS04	Solid	09/28/22 14:20	09/29/22 08:35	0.5
890-3106-5	SS05	Solid	09/28/22 14:25	09/29/22 08:35	0.5

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Chain of Custody

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) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Nash Unit 36	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558117	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	Thmo07
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.6
Total Containers:		Corrected Temperature:	1.4

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
SS01	S	9/28/2022	14:00	.5'	grab/	1	x	x	x
SS02	S	9/28/2022	14:05	.5'	grab/	1	x	x	x
SS03	S	9/28/2022	14:15	.5'	grab/	1	x	x	x
SS04	S	9/28/2022	14:20	.5'	grab/	1	x	x	x
SS05	S	9/28/2022	14:25	.5'	grab/	1	x	x	x

ANALYSIS REQUEST

Parameters

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2S0_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Incident ID:
nAPP2224236187
Cost Center:
1137151001
AFE:

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_2 Na Sr Tl 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 Tl 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 $85.00 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
1					
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3106-1
SDG Number: 03E1558117

Login Number: 3106
List Number: 1
Creator: Clifton, Cloe

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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3106-1
SDG Number: 03E1558117

Login Number: 3106
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/30/22 10:28 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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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/7/2022 4:28:00 PM

JOB DESCRIPTION

Nash 36
SDG NUMBER 03E1558117

JOB NUMBER

880-22178-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Eurofins Midland

Job Notes

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

Generated
12/7/2022 4:28:00 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Nash 36

Laboratory Job ID: 880-22178-1
SDG: 03E1558117

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22178-1
SDG: 03E1558117

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.
¤	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/Site: Nash 36

Job ID: 880-22178-1
SDG: 03E1558117

Job ID: 880-22178-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22178-1

Receipt
The samples were received on 12/1/2022 11:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40957 and analytical batch 880-41087 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22178-1
SDG: 03E1558117

Client Sample ID: PH01

Lab Sample ID: 880-22178-1

Date Collected: 11/18/22 10:00
Matrix: Solid
Date Received: 12/01/22 11:17
Sample Depth: 1'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	476	F1	5.01		mg/Kg			12/07/22 12:48	1

Client Sample ID: PH01A

Lab Sample ID: 880-22178-2

Date Collected: 11/18/22 10:05
Matrix: Solid
Date Received: 12/01/22 11:17
Sample Depth: 2'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1240		49.6		mg/Kg			12/07/22 13:12	10

QC Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22178-1
SDG: 03E1558117

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40957/1-A
Matrix: Solid
Analysis Batch: 41087

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			12/07/22 12:24	1

Lab Sample ID: LCS 880-40957/2-A
Matrix: Solid
Analysis Batch: 41087

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.8		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40957/3-A
Matrix: Solid
Analysis Batch: 41087

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	263.6		mg/Kg		105	90 - 110	8	20

Lab Sample ID: 880-22178-1 MS
Matrix: Solid
Analysis Batch: 41087

Client Sample ID: PH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	476	F1	251	682.9	F1	mg/Kg		82	90 - 110		

Lab Sample ID: 880-22178-1 MSD
Matrix: Solid
Analysis Batch: 41087

Client Sample ID: PH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	476	F1	251	708.5		mg/Kg		93	90 - 110	4	20

QC Association Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22178-1
SDG: 03E1558117

HPLC/IC

Leach Batch: 40957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22178-1	PH01	Soluble	Solid	DI Leach	
880-22178-2	PH01A	Soluble	Solid	DI Leach	
MB 880-40957/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22178-1 MS	PH01	Soluble	Solid	DI Leach	
880-22178-1 MSD	PH01	Soluble	Solid	DI Leach	

Analysis Batch: 41087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22178-1	PH01	Soluble	Solid	300.0	40957
880-22178-2	PH01A	Soluble	Solid	300.0	40957
MB 880-40957/1-A	Method Blank	Soluble	Solid	300.0	40957
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	300.0	40957
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40957
880-22178-1 MS	PH01	Soluble	Solid	300.0	40957
880-22178-1 MSD	PH01	Soluble	Solid	300.0	40957

Lab Chronicle

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22178-1
SDG: 03E1558117

Client Sample ID: PH01

Date Collected: 11/18/22 10:00
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22178-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		1	41087	CH	EET MID	12/07/22 12:48

Client Sample ID: PH01A

Date Collected: 11/18/22 10:05
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22178-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		10	41087	CH	EET MID	12/07/22 13:12

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22178-1
SDG: 03E1558117

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

Method Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22178-1
SDG: 03E1558117

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22178-1
SDG: 03E1558117

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-22178-1	PH01	Solid	11/18/22 10:00	12/01/22 11:17	1'
880-22178-2	PH01A	Solid	11/18/22 10:05	12/01/22 11:17	2'

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Chain of Custody

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) 794-1296
Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199

Work Order No: 22178

www xenco com Page 1 of 1

Project Manager	Kalei Jennings	Bill to (if different)	Garrett Green
Company Name	Ensolum	Company Name	XTO Energy
Address	3122 National Parks Hwy	Address	3104 E Green St.
City, State ZIP	Carlsbad NM 88220	City, State ZIP	Carlsbad NM 88220
Phone	303-887-2946	Email	Garrett Green@ExxonMobil com

Work Order Comments

Program UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☐ ADaPT ☐ Other

Project Name	Nash 36	Turn Around	
Project Number	03E1558117	☑ Routine ☐ Rush	
Project Location		Due Date	
Sampler's Name	Connor Whitman	TAT starts the day received by the lab if received by 4 30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank.	Yes No	Wet Ice	(Yes) No	
Samples Received Intact.	Yes No	Thermometer ID	T-NM-007	
Cooler Custody Seals.	Yes No N/A	Correction Factor		
Sample Custody Seals.	Yes No N/A	Temperature Reading	3.2	
Total Containers.		Corrected Temperature		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA 300 0)	TPH (8015)	BTEX (8021)
PH01	S	11/18/2022	10 00	1'	Grab/	1		x	x	x
PH01A	S	11/18/2022	10 05	2'	Grab/	1		x	x	x

Parameters

Preservative Codes

None NO DI Water H_2O
Cool Cool MeOH Me
HCL HC HNO_3 HN
H_2S0_4 H_2 NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Comments

Incident ID
nAPP2224236187
Cost Center
1137151001
AFE

880-22178 Chain of Custody

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_2 Na Sr Tl 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 Tl 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 $85.00 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
1		12.1.22 11:17	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22178-1
SDG Number: 03E1558117

Login Number: 22178
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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.	True	
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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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/7/2022 4:28:34 PM

JOB DESCRIPTION

Nash 36
SDG NUMBER 03E1558117

JOB NUMBER

880-22181-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Eurofins Midland

Job Notes

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

Generated
12/7/2022 4:28:34 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Nash 36

Laboratory Job ID: 880-22181-1
SDG: 03E1558117

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-22181-1
Project/Site: Nash 36 SDG: 03E1558117

Qualifiers

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.
¤	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/Site: Nash 36

Job ID: 880-22181-1
SDG: 03E1558117

Job ID: 880-22181-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22181-1

Receipt
The sample was received on 12/1/2022 11:17 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40957 and analytical batch 880-41087 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22181-1
SDG: 03E1558117

Client Sample ID: PH04
Date Collected: 11/18/22 13:00
Date Received: 12/01/22 11:17
Sample Depth: 1

Lab Sample ID: 880-22181-1
Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14600		251		mg/Kg			12/07/22 14:09	50

QC Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22181-1
SDG: 03E1558117

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40957/1-A
Matrix: Solid
Analysis Batch: 41087

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			12/07/22 12:24	1

Lab Sample ID: LCS 880-40957/2-A
Matrix: Solid
Analysis Batch: 41087

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.8		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40957/3-A
Matrix: Solid
Analysis Batch: 41087

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	263.6		mg/Kg		105	90 - 110	8	20

QC Association Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22181-1
SDG: 03E1558117

HPLC/IC

Leach Batch: 40957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22181-1	PH04	Soluble	Solid	DI Leach	
MB 880-40957/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 41087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22181-1	PH04	Soluble	Solid	300.0	40957
MB 880-40957/1-A	Method Blank	Soluble	Solid	300.0	40957
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	300.0	40957
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40957

Lab Chronicle

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22181-1
SDG: 03E1558117

Client Sample ID: PH04

Date Collected: 11/18/22 13:00
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22181-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		50	41087	CH	EET MID	12/07/22 14:09

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22181-1
SDG: 03E1558117

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

Method Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22181-1
SDG: 03E1558117

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22181-1
SDG: 03E1558117

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-22181-1	PH04	Solid	11/18/22 13:00	12/01/22 11:17	1

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Chain of Custody

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) 794-1296
Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199

Work Order No: 22181

www.xenco.com Page 1 of 1

Project Manager	Kalei Jennings	Bill to (if different)	Garrett Green
Company Name	Ensolum	Company Name:	XTO Energy
Address	3122 National Parks Hwy	Address	3104 E Green St
City, State ZIP	Carlsbad, NM 88220	City, State ZIP	Carlsbad NM 88220
Phone	303-887-2946	Email	Garrett Green@ExxonMobil.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☐ ADaPT ☐ Other:

Project Name:	Nash 36	Turn Around	
Project Number:	03E1558117	☑ Routine ☐ Rush	
Project Location:		Due Date	
Sampler's Name	Connor Whitman	TAT starts the day received by the lab if received by 4 30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank.	Yes No	Wet Ice	(Yes) No	
Samples Received Intact:	Yes No	Thermometer ID	T-NM-007	
Cooler Custody Seals.	Yes No N/A	Correction Factor		
Sample Custody Seals.	Yes No N/A	Temperature Reading	3.2	
Total Containers.		Corrected Temperature		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA 300 0)	TPH (8015)	BTEX (8021)
PH04	S	11/18/2022	1 00	1	grab/	1		x	x	x

Preservative Codes

None NO DI Water H_2O
Cool Cool MeOH Me
HCL HC HNO_3 HN
H_2SO_4 H_2 NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Comments

Incident ID
nAPP2224236187
Cost Center
1137151001
AFE

880-22181 Chain of Custody

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_2 Na Sr Tl 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 Tl U Hg 1631 / 245 1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by (Signature)	Date/Time
1		12.1.22 11:17	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

12/7/2022

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22181-1
SDG Number: 03E1558117

Login Number: 22181
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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.	True	
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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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/7/2022 4:28:47 PM

JOB DESCRIPTION

Nash 36
SDG NUMBER 03E1558117

JOB NUMBER

880-22182-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Eurofins Midland

Job Notes

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

Generated
12/7/2022 4:28:47 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Nash 36

Laboratory Job ID: 880-22182-1
SDG: 03E1558117

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-22182-1
Project/Site: Nash 36 SDG: 03E1558117

Qualifiers

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.
¤	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/Site: Nash 36

Job ID: 880-22182-1
SDG: 03E1558117

Job ID: 880-22182-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22182-1

Receipt
The samples were received on 12/1/2022 11:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40957 and 880-40957 and analytical batch 880-41087 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22182-1
SDG: 03E1558117

Client Sample ID: PH03

Lab Sample ID: 880-22182-1
Date Collected: 11/18/22 12:30
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7870		99.0		mg/Kg			12/07/22 14:17	20

Client Sample ID: PH03A

Lab Sample ID: 880-22182-2
Date Collected: 11/18/22 12:35
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7520		101		mg/Kg			12/07/22 14:25	20

Client Sample ID: PH03B

Lab Sample ID: 880-22182-3
Date Collected: 11/18/22 12:40
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4730		50.4		mg/Kg			12/07/22 14:34	10

QC Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22182-1
SDG: 03E1558117

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40957/1-A
Matrix: Solid
Analysis Batch: 41087

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			12/07/22 12:24	1

Lab Sample ID: LCS 880-40957/2-A
Matrix: Solid
Analysis Batch: 41087

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.8		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40957/3-A
Matrix: Solid
Analysis Batch: 41087

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	263.6		mg/Kg		105	90 - 110	8	20

QC Association Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22182-1
SDG: 03E1558117

HPLC/IC

Leach Batch: 40957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22182-1	PH03	Soluble	Solid	DI Leach	
880-22182-2	PH03A	Soluble	Solid	DI Leach	
880-22182-3	PH03B	Soluble	Solid	DI Leach	
MB 880-40957/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 41087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22182-1	PH03	Soluble	Solid	300.0	40957
880-22182-2	PH03A	Soluble	Solid	300.0	40957
880-22182-3	PH03B	Soluble	Solid	300.0	40957
MB 880-40957/1-A	Method Blank	Soluble	Solid	300.0	40957
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	300.0	40957
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40957

Lab Chronicle

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22182-1
SDG: 03E1558117

Client Sample ID: PH03
Date Collected: 11/18/22 12:30
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22182-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		20	41087	CH	EET MID	12/07/22 14:17

Client Sample ID: PH03A
Date Collected: 11/18/22 12:35
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22182-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		20	41087	CH	EET MID	12/07/22 14:25

Client Sample ID: PH03B
Date Collected: 11/18/22 12:40
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22182-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		10	41087	CH	EET MID	12/07/22 14:34

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22182-1
SDG: 03E1558117

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

Method Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22182-1
SDG: 03E1558117

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22182-1
SDG: 03E1558117

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-22182-1	PH03	Solid	11/18/22 12:30	12/01/22 11:17
880-22182-2	PH03A	Solid	11/18/22 12:35	12/01/22 11:17
880-22182-3	PH03B	Solid	11/18/22 12:40	12/01/22 11:17

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Chain of Custody

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) 794-1296
Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199

Work Order No: 22182

www.xenco.com Page 1 of 1

Project Manager	Kalei Jennings	Bill to (if different)	Garrett Green
Company Name	Ensolum	Company Name	XTO Energy
Address	3122 National Parks Hwy	Address	3104 E Green St.
City, State ZIP	Carlsbad, NM 88220	City, State ZIP	Carlsbad NM 88220
Phone	303-887-2946	Email	Garrett Green@ExxonMobil.com

Work Order Comments

Program UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☐ ADaPT ☐ Other

Project Name	Nash 36	Turn Around	
Project Number	03E1558117	☑ Routine ☐ Rush	
Project Location		Due Date	
Sampler's Name	Connor Whitman	TAT starts the day received by the lab if received by 4 30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank.	Yes No	Wet Ice	(Yes) No	
Samples Received Intact:	Yes No	Thermometer ID	T-NM-007	
Cooler Custody Seals.	Yes No N/A	Correction Factor		
Sample Custody Seals	Yes No N/A	Temperature Reading	3.2	
Total Containers:		Corrected Temperature		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA 300 0)	TPH (8015)	BTEX (8021)
PH03	S	11/18/2022	12 30	1	grab/	1		x	x	x
PH03A	S	11/18/2022	12 35	2	grab/	1		x	x	x
PH03B	S	11/18/2022	12 40	3	grab/	1		x	x	x

Preservative Codes

None NO DI Water H_2O
Cool Cool MeOH Me
HCL HC HNO_3 HN
H_2S0_4 H_2 NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Comments

Incident ID
nAPP2224236187
Cost Center
1137151001
AFE

880-22182 Chain of Custody

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_2 Na Sr Tl 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 Tl 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 $85.00 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
1		12/1/22 11:17	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22182-1
SDG Number: 03E1558117

Login Number: 22182
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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.	True	
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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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/7/2022 4:28:47 PM

JOB DESCRIPTION

Nash 36
SDG NUMBER 03E1558117

JOB NUMBER

880-22184-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Eurofins Midland

Job Notes

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

Generated
12/7/2022 4:28:47 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Nash 36

Laboratory Job ID: 880-22184-1
SDG: 03E1558117

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-22184-1
Project/Site: Nash 36 SDG: 03E1558117

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.
¤	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/Site: Nash 36

Job ID: 880-22184-1
SDG: 03E1558117

Job ID: 880-22184-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22184-1

Receipt
The samples were received on 12/1/2022 11:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40957 and analytical batch 880-41087 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22184-1
SDG: 03E1558117

Client Sample ID: PH06

Lab Sample ID: 880-22184-1
Date Collected: 11/18/22 13:55
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3440	F1	100		mg/Kg			12/07/22 14:42	20

Client Sample ID: PH06A

Lab Sample ID: 880-22184-2
Date Collected: 11/18/22 14:00
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4410		101		mg/Kg			12/07/22 15:06	20

Client Sample ID: PH06B

Lab Sample ID: 880-22184-3
Date Collected: 11/18/22 14:10
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4110		99.2		mg/Kg			12/07/22 15:14	20

QC Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22184-1
SDG: 03E1558117

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40957/1-A
Matrix: Solid
Analysis Batch: 41087

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			12/07/22 12:24	1

Lab Sample ID: LCS 880-40957/2-A
Matrix: Solid
Analysis Batch: 41087

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.8		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40957/3-A
Matrix: Solid
Analysis Batch: 41087

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	263.6		mg/Kg		105	90 - 110	8	20

Lab Sample ID: 880-22184-1 MS
Matrix: Solid
Analysis Batch: 41087

Client Sample ID: PH06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	3440	F1	5010	9937	F1	mg/Kg		130	90 - 110		

Lab Sample ID: 880-22184-1 MSD
Matrix: Solid
Analysis Batch: 41087

Client Sample ID: PH06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3440	F1	5010	10220	F1	mg/Kg		135	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22184-1
SDG: 03E1558117

HPLC/IC

Leach Batch: 40957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22184-1	PH06	Soluble	Solid	DI Leach	
880-22184-2	PH06A	Soluble	Solid	DI Leach	
880-22184-3	PH06B	Soluble	Solid	DI Leach	
MB 880-40957/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22184-1 MS	PH06	Soluble	Solid	DI Leach	
880-22184-1 MSD	PH06	Soluble	Solid	DI Leach	

Analysis Batch: 41087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22184-1	PH06	Soluble	Solid	300.0	40957
880-22184-2	PH06A	Soluble	Solid	300.0	40957
880-22184-3	PH06B	Soluble	Solid	300.0	40957
MB 880-40957/1-A	Method Blank	Soluble	Solid	300.0	40957
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	300.0	40957
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40957
880-22184-1 MS	PH06	Soluble	Solid	300.0	40957
880-22184-1 MSD	PH06	Soluble	Solid	300.0	40957

Lab Chronicle

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22184-1
SDG: 03E1558117

Client Sample ID: PH06

Lab Sample ID: 880-22184-1

Date Collected: 11/18/22 13:55
Matrix: Solid
Date Received: 12/01/22 11:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		20	41087	CH	EET MID	12/07/22 14:42

Client Sample ID: PH06A

Lab Sample ID: 880-22184-2

Date Collected: 11/18/22 14:00
Matrix: Solid
Date Received: 12/01/22 11:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		20	41087	CH	EET MID	12/07/22 15:06

Client Sample ID: PH06B

Lab Sample ID: 880-22184-3

Date Collected: 11/18/22 14:10
Matrix: Solid
Date Received: 12/01/22 11:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		20	41087	CH	EET MID	12/07/22 15:14

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22184-1
SDG: 03E1558117

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

Method Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22184-1
SDG: 03E1558117

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22184-1
SDG: 03E1558117

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-22184-1	PH06	Solid	11/18/22 13:55	12/01/22 11:17
880-22184-2	PH06A	Solid	11/18/22 14:00	12/01/22 11:17
880-22184-3	PH06B	Solid	11/18/22 14:10	12/01/22 11:17

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Environment Testing Xenco

Chain of Custody

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) 794-1296
Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199

Work Order No: 721184

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Project Manager:	Kalei Jennings	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E Green St.
City, State ZIP	Carlsbad, NM 88220	City, State ZIP	Carlsbad NM 88220
Phone:	303-887-2946 Email	Garrett Green@ExxonMobil.com	

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☐ ADaPT ☐ Other:

Project Name:	Nash 36	Turn Around	
Project Number:	03E1558117	☑ Routine ☐ Rush	
Project Location		Due Date	
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab if received by 4 30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	(Yes) No	
Samples Received Intact:	Yes No	Thermometer ID	T-NM.007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Temperature Reading	3.2	
Total Containers:		Corrected Temperature:		

Preservative Codes

None NO DI Water H_2O
Cool Cool MeOH Me
HCL HC HNO_3 HN
H_2SO_4 H_2 NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA 300 0)	TPH (8015)	BTEX (8021)
PH06	S	11/18/2022	1 55	1	grab/	1		x	x	x
PH06A	S	11/18/2022	2 00	2	grab/	1		x	x	x
PH06B	S	11/18/2022	2 10	3	grab/	1		x	x	x

Parameters

880-22184 Chain of Custody

Sample Comments

Incident ID
nAPP2224236187
Cost Center:
1137151001
AFE

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_2 Na Sr Tl 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 Tl 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 $85.00 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
1		12/1/22 11:17	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22184-1
SDG Number: 03E1558117

Login Number: 22184
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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.	True	
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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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/7/2022 4:29:24 PM

JOB DESCRIPTION

Nash 36
SDG NUMBER 03E1558117

JOB NUMBER

880-22185-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Eurofins Midland

Job Notes

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

Generated
12/7/2022 4:29:24 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Nash 36

Laboratory Job ID: 880-22185-1
SDG: 03E1558117

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-22185-1
Project/Site: Nash 36 SDG: 03E1558117

Qualifiers

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.
¤	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/Site: Nash 36

Job ID: 880-22185-1
SDG: 03E1558117

Job ID: 880-22185-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-22185-1

Receipt
The samples were received on 12/1/2022 11:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40957 and analytical batch 880-41087 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22185-1
SDG: 03E1558117

Client Sample ID: PH05
Lab Sample ID: 880-22185-1
Date Collected: 11/18/22 13:25
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10100		251		mg/Kg			12/07/22 15:39	50

Client Sample ID: PH05A
Lab Sample ID: 880-22185-2
Date Collected: 11/18/22 13:30
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5160		99.4		mg/Kg			12/07/22 15:47	20

Client Sample ID: PH05B
Lab Sample ID: 880-22185-3
Date Collected: 11/18/22 13:35
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7330		101		mg/Kg			12/07/22 15:55	20

Client Sample ID: PH05C
Lab Sample ID: 880-22185-4
Date Collected: 11/18/22 13:40
Matrix: Solid
Date Received: 12/01/22 11:17

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7650		99.2		mg/Kg			12/07/22 16:03	20

QC Sample Results

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22185-1
SDG: 03E1558117

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40957/1-A
Matrix: Solid
Analysis Batch: 41087

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			12/07/22 12:24	1

Lab Sample ID: LCS 880-40957/2-A
Matrix: Solid
Analysis Batch: 41087

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.8		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40957/3-A
Matrix: Solid
Analysis Batch: 41087

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	263.6		mg/Kg		105	90 - 110	8	20

QC Association Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22185-1
SDG: 03E1558117

HPLC/IC

Leach Batch: 40957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22185-1	PH05	Soluble	Solid	DI Leach	
880-22185-2	PH05A	Soluble	Solid	DI Leach	
880-22185-3	PH05B	Soluble	Solid	DI Leach	
880-22185-4	PH05C	Soluble	Solid	DI Leach	
MB 880-40957/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 41087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-22185-1	PH05	Soluble	Solid	300.0	40957
880-22185-2	PH05A	Soluble	Solid	300.0	40957
880-22185-3	PH05B	Soluble	Solid	300.0	40957
880-22185-4	PH05C	Soluble	Solid	300.0	40957
MB 880-40957/1-A	Method Blank	Soluble	Solid	300.0	40957
LCS 880-40957/2-A	Lab Control Sample	Soluble	Solid	300.0	40957
LCSD 880-40957/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40957

Lab Chronicle

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22185-1
SDG: 03E1558117

Client Sample ID: PH05
Date Collected: 11/18/22 13:25
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22185-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		50	41087	CH	EET MID	12/07/22 15:39

Client Sample ID: PH05A
Date Collected: 11/18/22 13:30
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22185-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		20	41087	CH	EET MID	12/07/22 15:47

Client Sample ID: PH05B
Date Collected: 11/18/22 13:35
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22185-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		20	41087	CH	EET MID	12/07/22 15:55

Client Sample ID: PH05C
Date Collected: 11/18/22 13:40
Date Received: 12/01/22 11:17

Lab Sample ID: 880-22185-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			40957	SMC	EET MID	12/03/22 13:46
Soluble	Analysis	300.0		20	41087	CH	EET MID	12/07/22 16:03

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22185-1
SDG: 03E1558117

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

Method Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22185-1
SDG: 03E1558117

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Nash 36

Job ID: 880-22185-1
SDG: 03E1558117

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-22185-1	PH05	Solid	11/18/22 13:25	12/01/22 11:17
880-22185-2	PH05A	Solid	11/18/22 13:30	12/01/22 11:17
880-22185-3	PH05B	Solid	11/18/22 13:35	12/01/22 11:17
880-22185-4	PH05C	Solid	11/18/22 13:40	12/01/22 11:17

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Chain of Custody

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) 794-1296
Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199

Work Order No: 22185

www xenco com Page 1 of 1

Project Manager	Kalei Jennings	Bill to (if different)	Garrett Green
Company Name	Ensolum	Company Name.	XTO Energy
Address	3122 National Parks Hwy	Address.	3104 E Green St.
City, State ZIP	Carlsbad, NM 88220	City, State ZIP	Carlsbad NM 88220
Phone	303-887-2946	Email	Garrett Green@ExxonMobil com

Work Order Comments

Program UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☐ ADaPT ☐ Other

Project Name	Nash 36	Turn Around	
Project Number	03E1558117	☑ Routine ☐ Rush	
Project Location		Due Date	
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab if received by 4 30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice	Yes No	
Samples Received Intact:	Yes No	Thermometer ID	T-Wm out	
Cooler Custody Seals.	Yes No N/A	Correction Factor		
Sample Custody Seals.	Yes No N/A	Temperature Reading	3.2	
Total Containers.		Corrected Temperature		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA 300 0)	TPH (8015)	BTEX (8021)
PH05	S	11/18/2022	1 25	1	grab/	1	x	x	x
PH05A	S	11/18/2022	1 30	2	grab/	1	x	x	x
PH05B	S	11/18/2022	1 35	3	grab/	1	x	x	x
PH05C	S	11/18/2022	1 40	4	grab/	1	x	x	x

CW

880-22185 Chain of Custody

Preservative Codes

None NO DI Water H_2O
Cool Cool MeOH Me
HCL HC HNO_3 HN
H_2S0_4 H_2 NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Comments

Incident ID
nAPP2224236187
Cost Center
1137151001
AFE

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_2 Na Sr Tl 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 Tl U Hg 1631 / 245 1 / 7470 / 7471

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Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1		12/1/22 11:17	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-22185-1
SDG Number: 03E1558117

Login Number: 22185
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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.	True	
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	

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Green, Garrett J
To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Billings, Bradford, EMNRD; Harimon, Jocelyn, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 11/7/22 - 11/11/22)
Date: Friday, November 4, 2022 11:41:02 AM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Nov 7, 2022.

Monday
- Nash Unit 36/ nAPP2224236187
- ADU 624 & 641 / NAPP2123634554 & NAPP2215449179
- Poker Lake Unit 409/ nAPP2223751933

Tuesday
- Nash Unit 36/ nAPP2224236187
- ADU 624 & 641 / NAPP2123634554 & NAPP2215449179
- Poker Lake Unit 409/ nAPP2223751933

Wednesday
- ADU 624 & 641 / NAPP2123634554 & NAPP2215449179
- Poker Lake Unit 409/ nAPP2223751933

Thursday
- BEU DI 30 Battery/ NAPP2200746777
- Poker Lake Unit 409/ nAPP2223751933

Friday
- BEU DI 30 Battery/ NAPP2200746777

Thank you!

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From:	Hamlet, Robert, EMNRD
To:	Collins, Melanie
Cc:	DelawareSpills /SM; Green, Garrett J; Kalei Jennings; Tacoma Morrissey; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject:	(Extension Approval) - XTO - Nash Unit 36 (Incident Number NAPP2224236187)
Date:	Monday, November 14, 2022 4:48:57 PM
Attachments:	image003.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2224236187**

Melanie,

Your request for an extension to **February 13th, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Monday, November 14, 2022 9:50 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Green, Garrett J <garrett.green@exxonmobil.com>; Kalei Jennings <kjennings@ensolum.com>; Tacoma Morrissey <tmorrissey@ensolum.com>
Subject: [EXTERNAL] XTO- Extension Request- Nash Unit 36 (Incident Number NAPP2224236187)

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

All,

Nash Unit 36 (Incident Number NAPP2224236187)

XTO is requesting an extension for the current deadline of November 15, 2022 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the Nash Unit 36

(Incident Number NAPP2224236187). The release occurred on August 17, 2022, and initial site assessment activities have been completed. Excavation activities were completed last week and are pending laboratory analytical results. Due to the salt lake located adjacent to and surrounding the Site, additional background information is needed to complete remediation activities. In order to review the laboratory analytical results, discuss remedial options, and submit a remediation work plan or closure report, XTO requests an extension until February 13, 2023.

Thank you,

Melanie Collins

XTO ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

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

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

CONDITIONS

Action 185642

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 185642
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Remediation Plan is Conditionally Approved. Due to high karst and shallow groundwater, the release needs to meet the strictest closure criteria standards. The proposed background chloride concentration of 14,600 mg/kg is denied. The background numbers at a depth of 1 foot should be averaged. The background numbers at a depth of 2 feet should be averaged and so on. The composite numbers will be used for the final background chloride numbers. Samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Collect confirmation samples, representing no more than 200 ft2. A closure report will need to be completed and uploaded within 90 days.	6/14/2023