



May 19, 2025

New Mexico Oil Conservation Division

New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Deferral Request
Big Eddy Unit 34 Hackberry
Incident Number NAPP2408932392
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* following additional delineation activities performed at the Big Eddy Unit 34 Hackberry (Site), in response to the denial of an original *Closure Request*, dated October 11, 2024. In the denial, the New Mexico Oil Conservation Division (NMOCD) expressed concern that delineation of the waste-containing soil was not adequately determined. Based on new sampling results, XTO is requesting deferral of final remediation for Incident Number NAPP2408932392 until the Site is reconstructed, and/or the well pad is abandoned.

All of the details regarding the incident, Site characterization, and remediation already conducted can be referenced in the original *Closure Request* attached in Appendix A. NMOCD denied the *Closure Request* on November 11, 2024, for the following reason:

All edge/sidewall samples must be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release.

DELINEATION ACTIVITIES

On February 3, 2025, Ensolum personnel were at the Site to conduct additional delineation activities. Two boreholes (BH04 and BH05) were advanced utilizing a hand auger within the release extent area, which had not been excavated due to the proximity of active production equipment and pipelines, to assess the vertical extent of the remaining waste-containing soil. Delineation soil samples were collected in each borehole at depths ranging from 0.5 feet to 8 feet below ground surface (bgs). Discrete soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations for the delineation soil samples were logged on lithologic/soil sampling logs, which are included in Appendix B. Photographic documentation was collected during the Site assessment and a Photographic Log is included in Appendix C. All delineation soil sample locations collected for this release are depicted on Figure 1.

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 Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following constituents of concern (COCs): BTEX following United States Environmental

XTO Energy, Inc
Deferral Request
Big Eddy Unit 34 Hackberry

Protection Agency (EPA) Method 8021B; Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples collected from a depth of 0.5 feet bgs in BH04 and BH05 indicated TPH concentrations exceeded the Closure Criteria. Laboratory analytical results for samples collected at depths ranging from 2 feet to 8 feet bgs indicated all COCs were in compliance with the Closure Criteria, successfully defining the vertical extent of the release. In addition, the terminal samples for both BH04, collected at 7 feet bgs, and BH05, collected at 8 feet bgs, indicated all COC concentrations were in compliance with the strictest Table I Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

DEFERRAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and surface pipelines preventing excavation of impacted soil. The impacted soil is limited to the area between active production equipment, where remediation would require a major facility deconstruction. The impacted soil remaining in place is delineated vertically by delineation soil samples BH04 and BH05, collected at depths ranging from 2 feet bgs to 4 feet bgs. An estimated 134 cubic yards of impacted soil remains immediately adjacent to or below active production equipment. The requested area of deferral is depicted on Figure 2.

XTO does not believe deferral will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet and the impacted soil remaining in place is limited in areal and vertical extent.

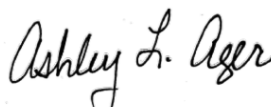
Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number NAPP2408932392 until final reclamation of the well pad or major facility construction, whichever comes first.

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

Sincerely,
Ensolum, LLC



Tracy Hillard
Project Engineer



Ashley Ager, PG, MS
Program Director

cc: Colton Brown, XTO
Kaylan Dirkx, XTO
Bureau of Land Management

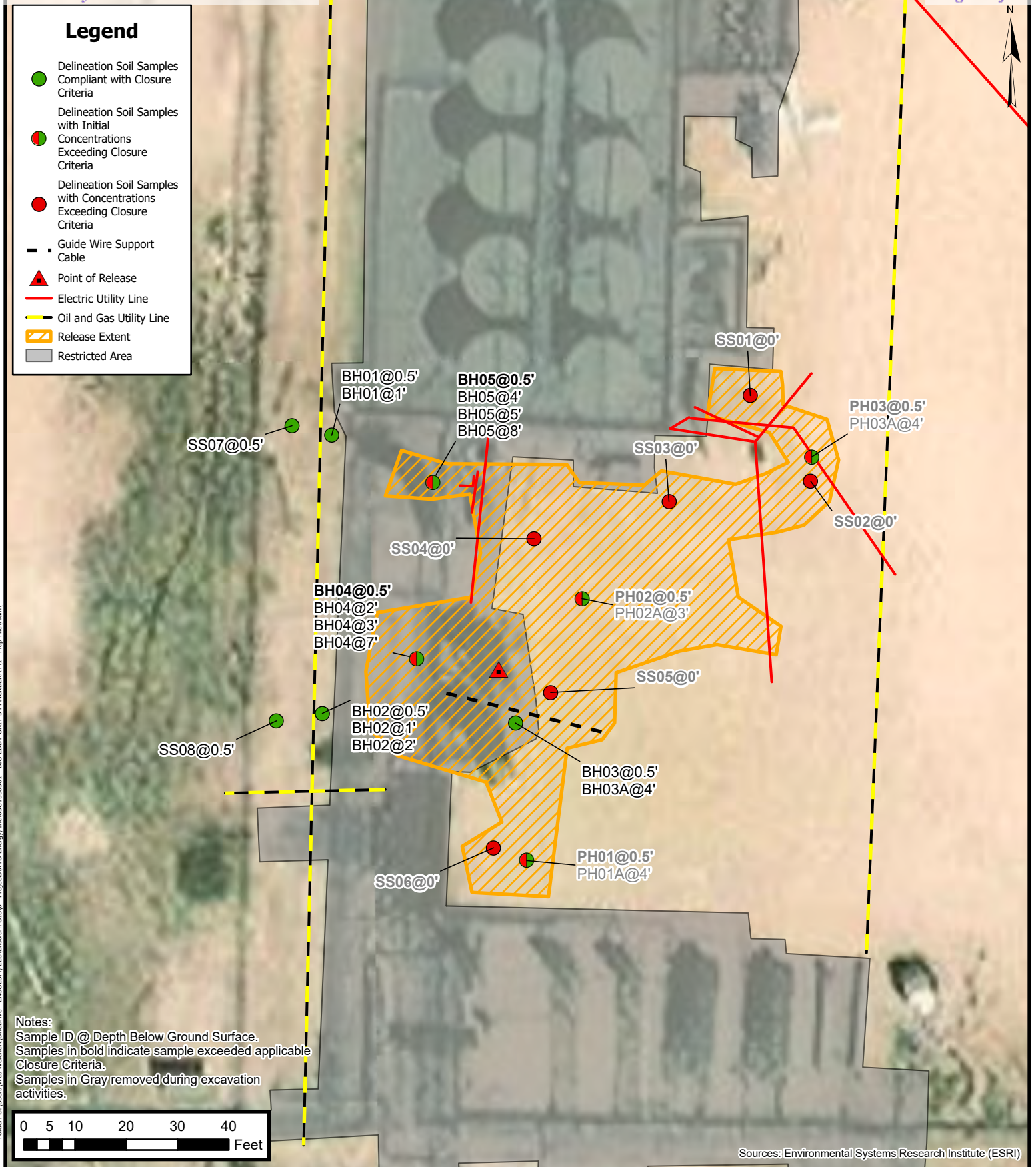
XTO Energy, Inc
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Appendices:

Figure 1	Delineation Soil Sample Locations
Figure 2	Requested Area of Deferral
Table 1	Soil Sample Analytical Results
Appendix A	October 11, 2024 <i>Closure Request</i>
Appendix B	Lithologic / Soil Sampling Logs
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation



FIGURES

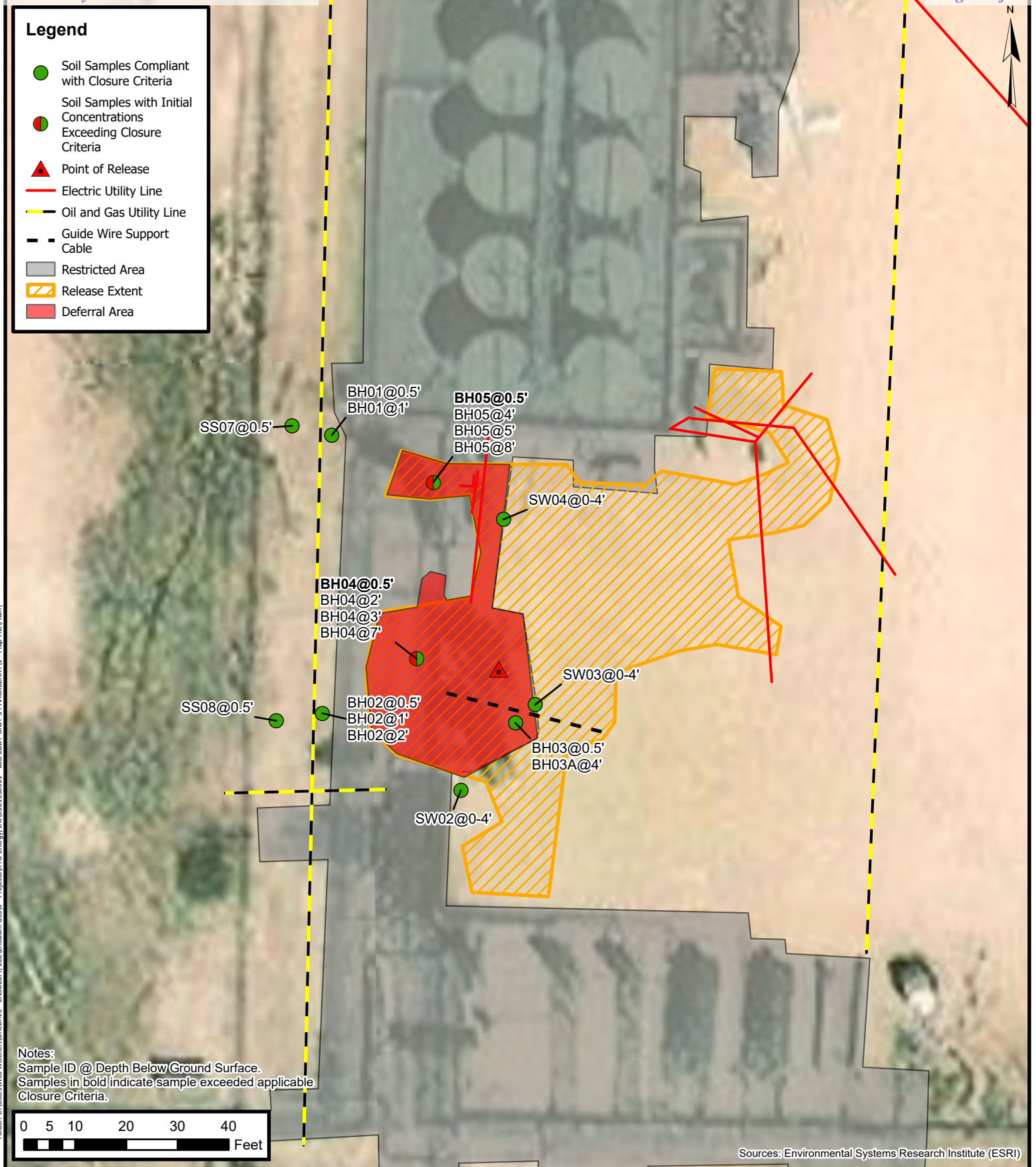


Delineation Soil Sample Locations

XTO Energy, Inc
 Big Eddy Unit 34 Hackberry
 Incident Number: NAPP2408932392
 Unit A, Sec 34, T19S, R31E
 Eddy County, New Mexico

FIGURE

1



Requested Area of Deferral

XTO Energy, Inc
 Big Eddy Unit 34 Hackberry
 Incident Number: NAPP2408932392
 Unit A, Sec 34, T19S, R31E
 Eddy County, New Mexico

FIGURE
2



TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Big Eddy Unit 34 Hackberry
 XTO Energy, Inc
 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
SS01	05/20/2024	0	0.805	71.2	1,620	45,900	5,490	47,520	53,010	128
SS02	05/20/2024	0	0.3	28.8	459	34,200	4,840	34,659	39,499	784
SS03	05/20/2024	0	<0.250	6.81	227	39,200	5,230	39,427	44,657	19,400
SS04	05/20/2024	0	<0.250	17.4	475	34,500	4,530	34,975	39,505	17,600
SS05	05/20/2024	0	<0.250	9.72	304	35,800	4,190	36,104	40,294	11,400
SS06	05/20/2024	0	6.33	89.1	1,610	41,500	4,710	43,110	47,820	992
SS07	07/23/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS08	07/23/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
PH02	05/30/2024	0.5	1.97	174	2,240	6,460	874	8,700	9,574	832
PH02A	05/30/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
PH03	05/30/2024	0.5	<0.050	4.75	103	1,710	312	1,813	2,125	320
PH03A	05/30/2024	4	<0.050	<0.300	<10.0	37.2	<10.0	37.2	37.2	480
BH01	06/27/2024	0.5	<0.050	<0.300	<10.0	111	55.3	111	166	368
BH01	06/27/2024	1	<0.050	<0.300	<10.0	359	231	359	590	288
BH02	06/27/2024	0.5	<0.050	<0.300	<10.0	481	316	481	797	368
BH02	06/27/2024	1	<0.050	<0.300	<10.0	291	198	291	489	256
BH02	06/27/2024	2	<0.050	<0.300	<10.0	264	163	264	427	272
BH03	07/12/2024	0.5	<0.050	<0.300	<10.0	379	228	379	607	1,170
BH03A	07/12/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384
BH04	02/03/2025	0.5	<0.050	2.58	109	4,390	1,020	4,499	5,519	192
BH04	02/03/2025	2	<0.050	<0.300	<10.0	136	52.6	136	189	320
BH04	02/03/2025	3	<0.050	<0.300	<10.0	42.2	<10.0	42.2	42.2	640
BH04	02/03/2025	7	<0.050	<0.300	<10.0	73.4	18.9	73.4	92.3	400
BH05	02/03/2025	0.5	<0.050	<0.300	<10.0	3,790	1,190	3,790	4,980	48.0
BH05	02/03/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
BH05	02/03/2025	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
BH05	02/03/2025	8	<0.050	<0.300	<10.0	19.4	<10.0	19.4	19.4	16.0



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Big Eddy Unit 34 Hackberry
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Excavation Soil Samples										
SW02	06/03/2024	0-4	<0.050	<0.300	<10.0	362	135	362	497	496
SW03	06/03/2024	0-4	<0.050	<0.300	<10.0	18.8	<10.0	18.8	18.8	688
SW04	06/03/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities



APPENDIX A

October 11, 2024 *Closure Request*



October 11, 2024

New Mexico Oil Conservation Division

New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Closure Request
Big Eddy Unit 34 Hackberry
Incident Number NAPP2408932392
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities at the Big Eddy Unit 34 Hackberry (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of crude oil. Based on field observations and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing Site assessment, delineation, and excavation activities that have occurred and requesting no further remediation for Incident Number NAPP2408932392.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 34, Township 19 South, Range 31 East, in Eddy County, New Mexico (32.62184°, -103.85159°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On March 15, 2024, a valve failed causing the release of approximately 6 barrels (bbls) of crude oil onto the surface of the pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 3 bbls of released fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via Notification of Release (NOR) and Initial C-141 Application (C-141) on March 29, 2024. The release was assigned Incident Number NAPP2408932392 (Subject Release).

SITE HISTORY

On August 16, 2024, XTO submitted an extension request via email to the NMOCD. The extension request stated:

XTO is requesting an extension for a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for the attached locations/incident numbers listed in this message. We understand that the releases all occurred between February and March of this year and attendant documentation is overdue. Kindly be aware that these occurred during a high turnover period of personnel in our department, transitioning staff, and a large company-wide data migration that collectively disturbed our incident tracking efforts for remediation. In our efforts to correct the

XTO Energy, Inc
Closure Request
Big Eddy Unit 34 Hackberry



issue, XTO is proactively assigning each of these incidents to be successfully addressed by contractors for closure in accordance with 19.15.29.12 NMAC.

On August 19, 2024, the NMOCD denied the extension request for the following reason:

An extension request needs to be requested before the Remediation Closure Report Due Date Deadline. All of these incidents are at least 60 days out of compliance. The extension requests are denied. Please include this e-mail correspondence in the remediation and/or closure reports.

On August 29, 2024, Ensolum personnel visited the Site and reviewed initial release photographs, internal reports, and the C-141. It was discovered the Subject Release had been previously remediated. On April 26, 2024, another release occurred overlapping the Subject Release and was assigned Incident Number NAPP2412351243 (Approved Release). The Approved Release was remediated from May 20, 2024, through July 23, 2024. A closure report was submitted on July 25, 2024, to the NMOCD and was approved on July 30, 2024. Below are the details of the remediation activities and laboratory analytical results as they relate to the Approved Release, but only encompassing the Subject Release and as such, are utilized for describing remedial actions addressing the March 2024 release, Incident Number NAPP2408932392.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to determine 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 below. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a soil boring drilled for determination of regional groundwater depth. On April 26, 2021, a soil boring permitted by New Mexico Office of the State Engineer (OSE) as CP-1864 was advanced approximately 0.42 miles west of the Site. The boring was drilled to a total depth of 110 feet bgs. A field geologist logged and described soils continuously. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned using hydrated bentonite chips. The Well Record and Log for CP-1864 is included in Appendix A. All wells used to evaluate depth to groundwater are presented on Figure 1.

The closest continuously flowing or significant watercourse to the Site is a dry wash located approximately 13,288 feet north of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low 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

XTO Energy, Inc
Closure Request
Big Eddy Unit 34 Hackberry



- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES

On May 20, 2024, Site assessment activities were conducted by Ensolum to evaluate the release extent based on information provided on the Form-C141 and visual observations. Six delineation soil samples (SS01 through SS06) were collected inside the release extent. The delineation 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 delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was collected during the Site assessment and a Photographic Log is included in Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method SM4500.

Laboratory analytical results for delineation soil samples SS01 through SS06 indicated TPH-GRO/TPH-DRO and total TPH concentrations exceeded the Closure Criteria. Laboratory analytical results for soil samples SS01 and SS06 exhibited BTEX concentrations exceeding the Closure Criteria. All remaining COCs for soil samples SS01 through SS06 indicated concentrations below Closure Criteria. Based on visible staining in the release area and laboratory analytical results, additional delineation and excavation activities were warranted.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

Between May 30 and July 23, 2024, Ensolum personnel were at the Site to oversee delineation and excavation activities. Three potholes (PH01 through PH03) were advanced utilizing heavy equipment, and three boreholes (BH01 through BH03) were advanced utilizing a hand auger within and around the release extent area to assess the vertical extent of the release. Delineation soil samples were collected in each pothole and borehole at depths ranging from 0.5 feet to 4 feet bgs. The delineation soil samples were field screened for VOCs and chloride as described above. The delineation soil samples were collected and handled as described above and were transported under strict chain-of-custody procedures to Cardinal for analysis of the same COCs listed above. Field screening results and observations for all potholes and boreholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil sample locations are depicted on Figure 2.

Impacted soil was excavated from the release area as indicated by delineation soil sample laboratory analytical results. Excavation activities were performed utilizing a backhoe, track hoe, hydrovacuum truck, and transport vehicles. The excavation occurred on the well pad near active production equipment and pipelines. Due to the active production equipment and a guide wire cable located within the release extent area, running from the top of the heater treater to the ground surface, the excavation was divided into two separate extents, which made portions of the release extent inaccessible by heavy equipment.

XTO Energy, Inc
Closure Request
Big Eddy Unit 34 Hackberry



To direct excavation activities, Ensolum personnel screened soil for VOCs and chlorides. Following removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and floor of the excavation. The 5-point composite soil samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples FS01 through FS17 were collected from the floor of the excavation at a depth of 4 feet bgs. Confirmation soil samples SW01 through SW08 were collected from the sidewalls of the excavation at depths ranging from ground surface to 4 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above and submitted to Cardinal. The excavation extent and confirmation soil sample locations are presented on Figure 3.

In order to define the western extent of the release to reclamation requirement standards, two additional delineation soil samples (SS07 and SS08) were collected on July 23, 2024. Soil samples SS07 and SS08 were collected outside the release extent, beyond borehole BH01 and BH02 locations, at a depth of 0.5 feet bgs.

The final excavation extent, between both excavated areas, measured approximately 3,000 square feet. A total of approximately 460 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation area was secured with fencing.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all confirmation soil samples collected indicated all COC concentrations were compliant with the Closure Criteria. Additionally, results from analysis of confirmation sidewall soil samples SW01, SW02, SW04 through SW06, and SW08 indicated all COC concentrations were compliant with the reclamation requirement and confirms the southern, eastern, and northern extent of the release.

Laboratory analytical results for delineation soil samples SS01 through SS06 and PH01 through PH03 collected at 0.5 feet bgs indicated COC concentrations exceeding Closure Criteria; however, soil represented by these soil samples was removed during excavation activities. Laboratory analytical results for delineation soil samples SS07 and SS08 indicated COC concentrations were in compliance with Closure Criteria and reclamation requirement, and thus define the western extent of the release area. Laboratory analytical results from terminal depths of potholes PH01 through PH03 and borehole BH03 are compliant with the strictest Table I Closure Criteria and provide vertical definition of the release. Laboratory analytical results for samples collected from boreholes BH01, BH02, and BH03 indicated the presence of elevated TPH (ranging from 166 mg/kg to 797 mg/kg). Additionally, the sample collected from 0.5 feet bgs in BH03 contained elevated chloride concentrations (1,170 mg/kg). The areas represented by those soil samples was inaccessible to heavy equipment, and waste-containing soil remains in place there. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

CLOSURE REQUEST

Based on initial release photographs, internal reports, and the C-141 for Incident Number nAPP2408932392, the Approved Release fully encompasses the Subject Release. Based on the soil sample analytical results, no further remediation is required. Based on laboratory analytical results from boreholes BH01 through BH03, waste-containing soil remains under active production equipment and pipelines. An estimated 438 cubic yards of waste-containing soil is present in an area covering

XTO Energy, Inc
Closure Request
Big Eddy Unit 34 Hackberry



approximately 3,950 square feet. The waste-containing soil will be removed at the time of final abandonment of the well pad or major facility deconstruction, whichever comes first. XTO backfilled the excavation with material purchased locally, and the area was recontoured to match pre-existing site conditions.

Sampling notifications were not submitted to the NMOCD portal for Incident Number NAPP2408932392 due to the release being remediated simultaneously with the Approved Release. XTO respectfully requests a variance to the 48-hour sampling notification per 19.15.29.12D (1a) NMAC. Incident Number NAPP2408932392 occurred prior to the Approved Release, the excavation extent fully encompasses Incident Number NAPP2408932392. Sampling notifications were submitted documenting the sampling events for the remedial activities to the NMOCD for the Approved Release. XTO believes the completed remedial actions are protective of human health, the environment, and groundwater.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the Site. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2408932392.

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

Sincerely,
Ensolum, LLC

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

Tracy Hillard
Project Engineer

A handwritten signature in black ink, appearing to read "Daniel R. Moir".

Daniel R. Moir, PG (Licensed in WY & TX)
Senior Managing Geologist

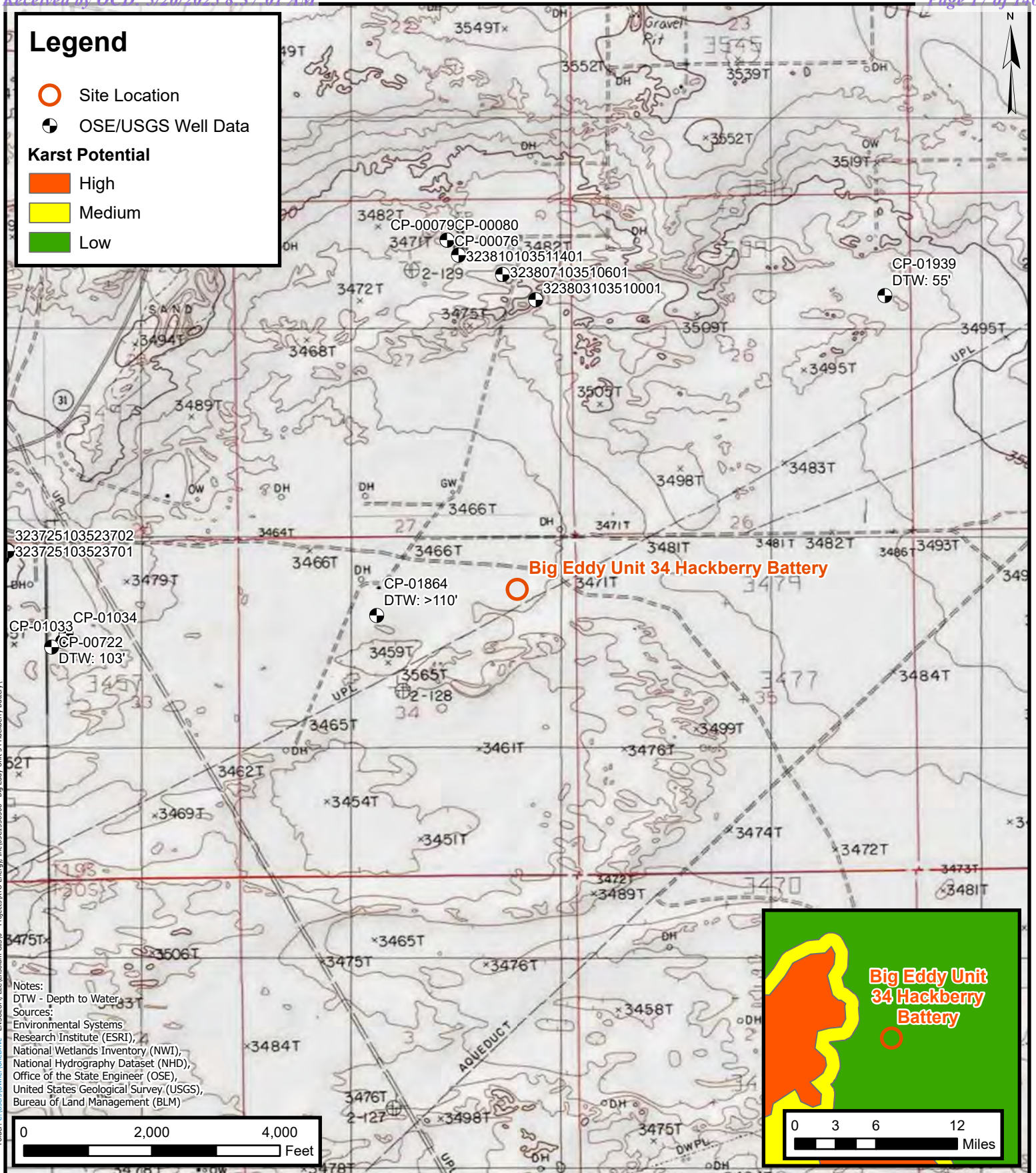
cc: Colton Brown, XTO
Kaylan Dirkx, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation 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



FIGURES

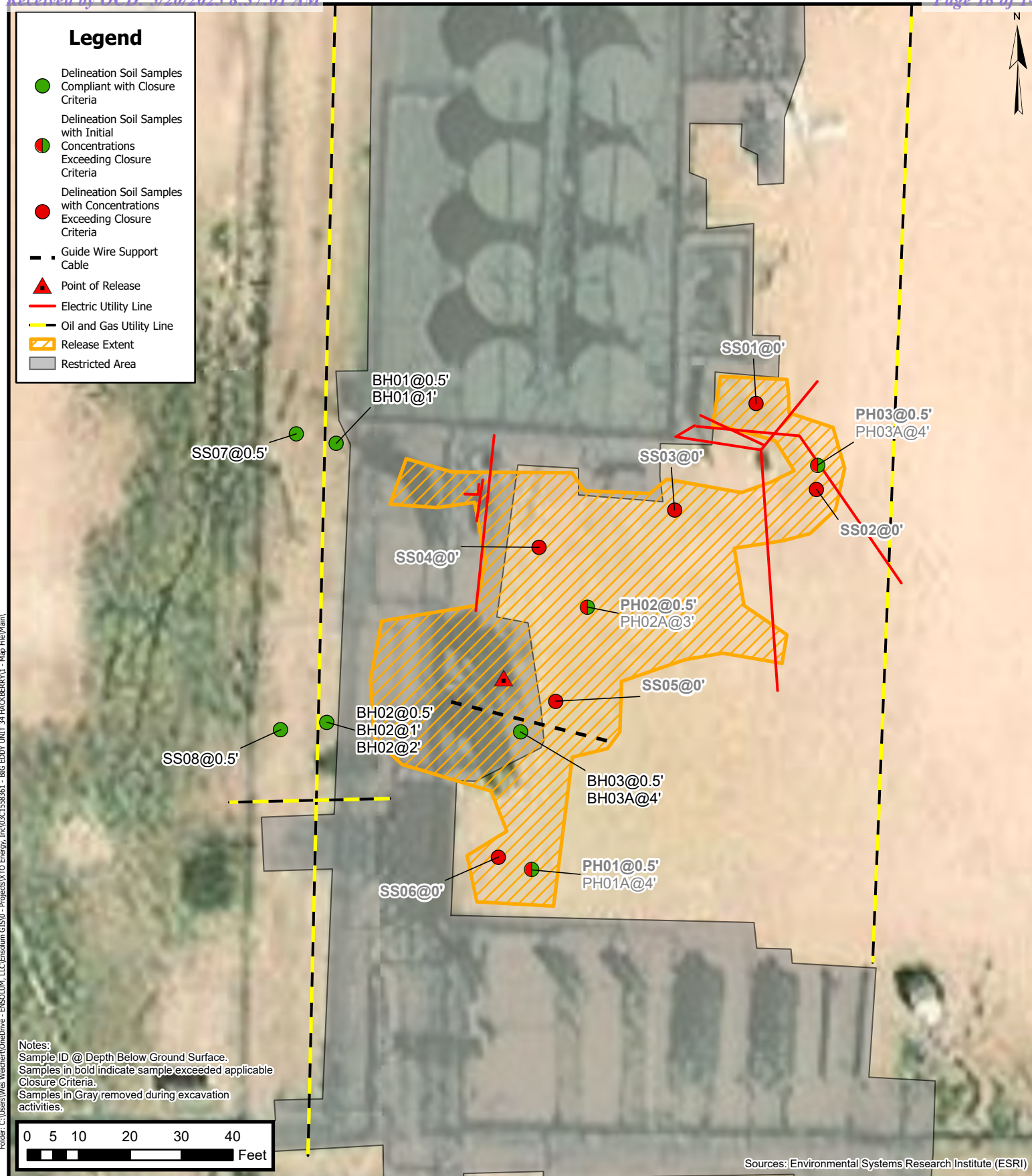


Site Receptor Map

XTO Energy, Inc
Big Eddy Unit 34 Hackberry
Incident Number: NAPP2412351243
Unit A, Sec 34, T19S, R31E
Eddy County, New Mexico

FIGURE

1



Delineation Soil Sample Locations

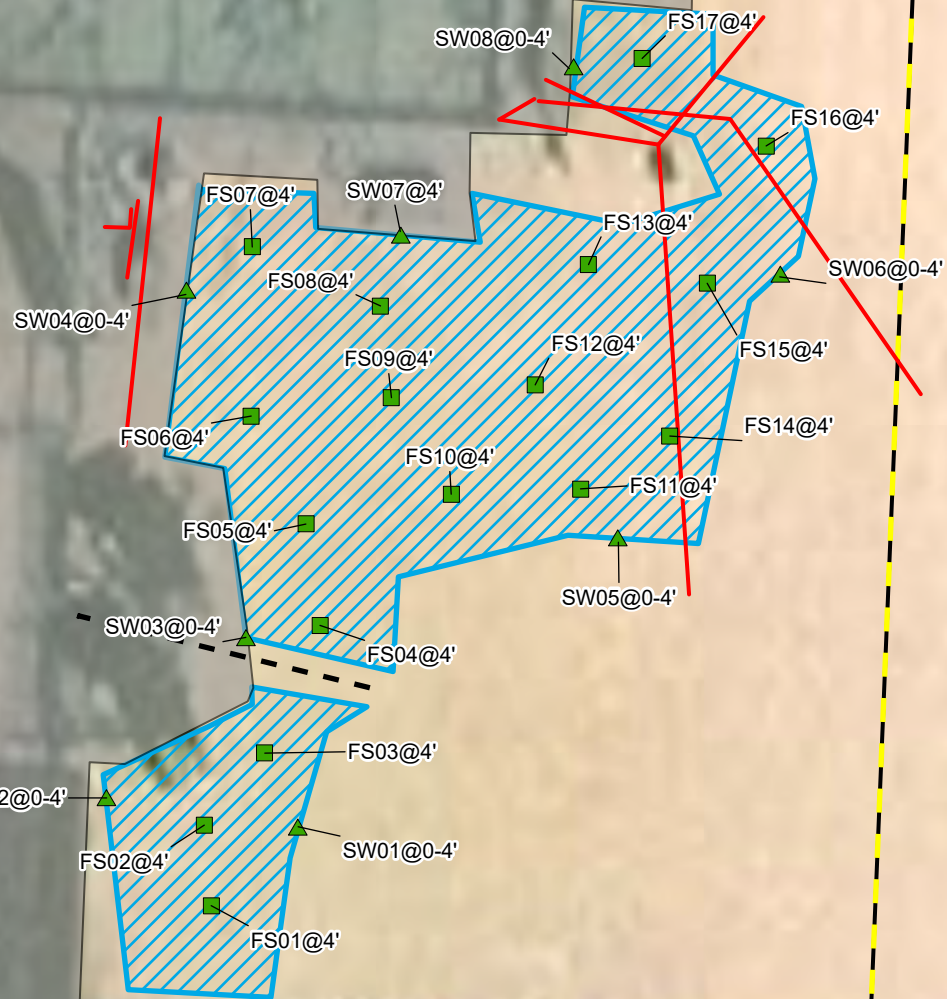
XTO Energy, Inc
 Big Eddy Unit 34 Hackberry
 Incident Number: NAPP2408932392
 Unit A, Sec 34, T19S, R31E
 Eddy County, New Mexico

FIGURE

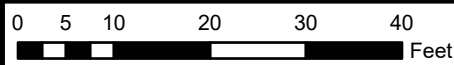
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Legend

- Excavation Floor Soil Samples Compliant with Closure Criteria
- ▲ Excavation Sidewall Soil Samples Compliant with Closure Criteria
- ▨ Excavation Extent
- Restricted Area
- Electric Utility Line
- Oil and Gas Utility Line
- - Guide Wire Support Cable



Notes:
Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI)

Excavation Soil Sample Locations

XTO Energy, Inc
Big Eddy Unit 34 Hackberry
Incident Number: NAPP2408932392
Unit A, Sec 34, T19S, R31E
Eddy County, New Mexico

FIGURE

3





TABLES

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Big Eddy Unit 34 Hackberry
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
SS01	05/20/2024	0	0.805	71.2	1,620	45,900	5,490	47,520	53,010	128
SS02	05/20/2024	0	0.3	28.8	459	34,200	4,840	34,659	39,499	784
SS03	05/20/2024	0	<0.250	6.81	227	39,200	5,230	39,427	44,657	19,400
SS04	05/20/2024	0	<0.250	17.4	475	34,500	4,530	34,975	39,505	17,600
SS05	05/20/2024	0	<0.250	9.72	304	35,800	4,190	36,104	40,294	11,400
SS06	05/20/2024	0	6.33	89.1	1,610	41,500	4,710	43,110	47,820	992
SS07	07/23/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS08	07/23/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
PH01	05/30/2024	0.5	<0.100	41.6	705	4,520	694	5,225	5,919	176
PH01A	05/30/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80
PH02	05/30/2024	0.5	1.97	174	2,240	6,460	874	8,700	9,574	832
PH02A	05/30/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
PH03	05/30/2024	0.5	<0.050	4.75	103	1,710	312	1,813	2,125	320
PH03A	05/30/2024	4	<0.050	<0.300	<10.0	37.2	<10.0	37.2	37.2	480
BH01	06/27/2024	0.5	<0.050	<0.300	<10.0	111	55.3	111	166	368
BH01	06/27/2024	1	<0.050	<0.300	<10.0	359	231	359	590	288
BH02	06/27/2024	0.5	<0.050	<0.300	<10.0	481	316	481	797	368
BH02	06/27/2024	1	<0.050	<0.300	<10.0	291	198	291	489	256
BH02	06/27/2024	2	<0.050	<0.300	<10.0	264	163	264	427	272
BH03	07/12/2024	0.5	<0.050	<0.300	<10.0	379	228	379	607	1,170
BH03A	07/12/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384
Confirmation Soil Samples										
FS01	06/03/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS02	06/03/2024	4	<0.050	<0.300	<10.0	39.9	<10.0	39.9	39.9	256
FS03	06/03/2024	4	<0.050	<0.300	<10.0	28.4	<10.0	28.4	28.4	432
FS04	06/03/2024	4	<0.050	<0.300	<10.0	122	35.4	122	157	2,480
FS05	06/03/2024	4	<0.050	<0.300	<10.0	12.9	<10.0	12.9	12.9	1,120
FS06	06/03/2024	4	<0.050	<0.300	<10.0	38.4	15.1	38.4	53.5	624
FS07	06/03/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	576
FS08	06/03/2024	4	<0.050	<0.300	<10.0	13.5	<10.0	13.5	13.5	144
FS09	06/04/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	560

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Big Eddy Unit 34 Hackberry
 XTO Energy, Inc
 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS10	06/04/2024	4	<0.050	<0.300	<10.0	19.1	<10.0	19.1	19.1	432
FS11	06/04/2024	4	<0.050	<0.300	<10.0	47.3	<10.0	47.3	47.3	592
FS12	06/04/2024	4	<0.050	<0.300	<10.0	38	<10.0	38	38	288
FS13	06/04/2024	4	<0.050	<0.300	<10.0	14.1	<10.0	14.1	14.1	736
FS14	06/04/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
FS15	06/04/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS16	06/04/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
FS17	07/12/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
SW01	06/03/2024	0-4	<0.050	<0.300	<10.0	62.2	15.2	62.2	77.4	224
SW02	06/03/2024	0-4	<0.050	<0.300	<10.0	362	135	362	497	496
SW03	06/03/2024	0-4	<0.050	<0.300	<10.0	18.8	<10.0	18.8	18.8	688
SW04	06/03/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
SW05	06/04/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SW06	06/04/2024	0-4	<0.050	<0.300	<10.0	16.7	<10.0	16.7	16.7	560
SW07	06/04/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	928
SW08	07/12/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities



APPENDIX A

Referenced Well Records



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER


www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (BH-01)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-1864 CP 1864			
	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707	
	WELL LOCATION (FROM GPS)	LATITUDE 32° 37' 14.58" N	DEGREES 32°	MINUTES 37'	SECONDS 14.58"	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84		
LONGITUDE -103° 51' 31.48" W								
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SW SE Sec. 15 T24S R31E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 02/26/2021		DRILLING ENDED 02/26/2021		DEPTH OF COMPLETED WELL (FT) temporary well material	BORE HOLE DEPTH (FT) 110	DEPTH WATER FIRST ENCOUNTERED (FT) n/a	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a	
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	110	±6.5	Boring- HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE

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

FILE NO. CP-1864	POD NO. 1	TRN NO. 686596
LOCATION 214 T19S R31E Sec 34	WELL TAG ID NO. NA	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	1.5	1.5	Caliche w/ sand, no odor, no stain, tan, off white, dry	Y ✓ N	
	1.5	13	11.5	Sand, no odor, no stain, m-f, well sorted, gray, trace silt, some caliche, dry	Y ✓ N	
	13	24	11	Sandstone, m-f, low consolidation, gray, little coarse gravel, dry	Y ✓ N	
	24	34	10	Sand w/ caliche, gray, tan, moist, m-f, well sorted	Y ✓ N	
	34	41	7	Caliche /Sand, m-f, well sorted, tan, offwhite, mod. consolidation, moist	Y ✓ N	
	41	50	9	Clayey sand, gray, fine grain, well sorted, med. plasticity, cohesive, moist, w/ cal	Y ✓ N	
	50	69	19	Caliche w/ sandy clay, m-f, no cohesion, no plasticity, dry	Y ✓ N	
	69	79	10	Sandstone, tan, m-f, , high consolidation, dry	Y ✓ N	
	79	92	13	Clayey sand, medium plasticity, cohesive, fine grained sand, brown, moist	Y ✓ N	
	92	110	18	Claystone, brown, high plasticity, cohesive, no odor, no stain, moist	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:					TOTAL ESTIMATED WELL YIELD (gpm): 0.00	
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:						
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: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.					
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge OSE DJJ MAR 11 2021 PM4:27						
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: <div style="display: flex; justify-content: space-between;"> <div>  SIGNATURE OF DRILLER / PRINT SIGNEE NAME </div> <div> Jackie D. Atkins DATE </div> </div>					

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. CP-1864	POD NO. 1	TRN NO. 686596
LOCATION 214 T19S R31E Sec 34	WELL TAG ID NO. NA	PAGE 2 OF 2

John R. D Antonio, Jr., P.E.
State Engineer



Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

**STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 686596
File Nbr: CP 01864
Well File Nbr: CP 01864 POD1

Apr. 07, 2021

KYLE ITTRELL
XTO ENERGY INC
6401 HOLIDAY HILL ROAD
MIDLAND, TX 79707

Greetings:

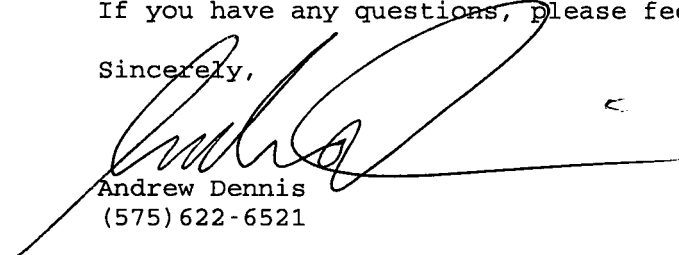
The above numbered permit was issued in your name on 01/29/2021.

The Well Record was received in this office on 03/11/2021, stating that it had been completed on 02/26/2021, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 01/28/2022.

If you have any questions, please feel free to contact us.

Sincerely,


Andrew Dennis
(575) 622-6521

drywell



APPENDIX B

Photographic Log

**Photographic Log**

XTO Energy, Inc
Big Eddy Hackberry 34 Battery
nAPP2408932392



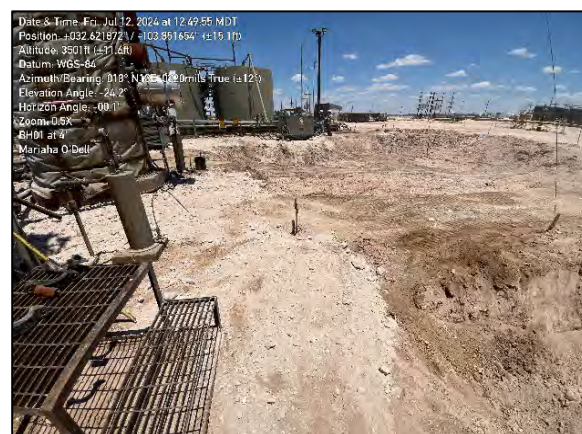
Photograph: 1 Date: 3/15/2024
Description: Incident Number NAPP2408932392 initial photo
View: North



Photograph: 2 Date: 5/20/2024
Description: Staining in release footprint
View: Northwest



Photograph: 3 Date: 5/20/2024
Description: Staining in release footprint
View: North



Photograph: 4 Date: 7/12/2024
Description: Final excavation extent
View: Northeast

**Photographic Log**

XTO Energy, Inc
Big Eddy Hackberry 34 Battery
nAPP2408932392



Photograph: 5 Date: 7/12/2024
Description: Final excavation extent
View: Northwest



Photograph: 6 Date: 7/12/2024
Description: Final excavation extent
View: South



Photograph: 7 Date: 7/20/2024
Description: Backfilling activities
View: North


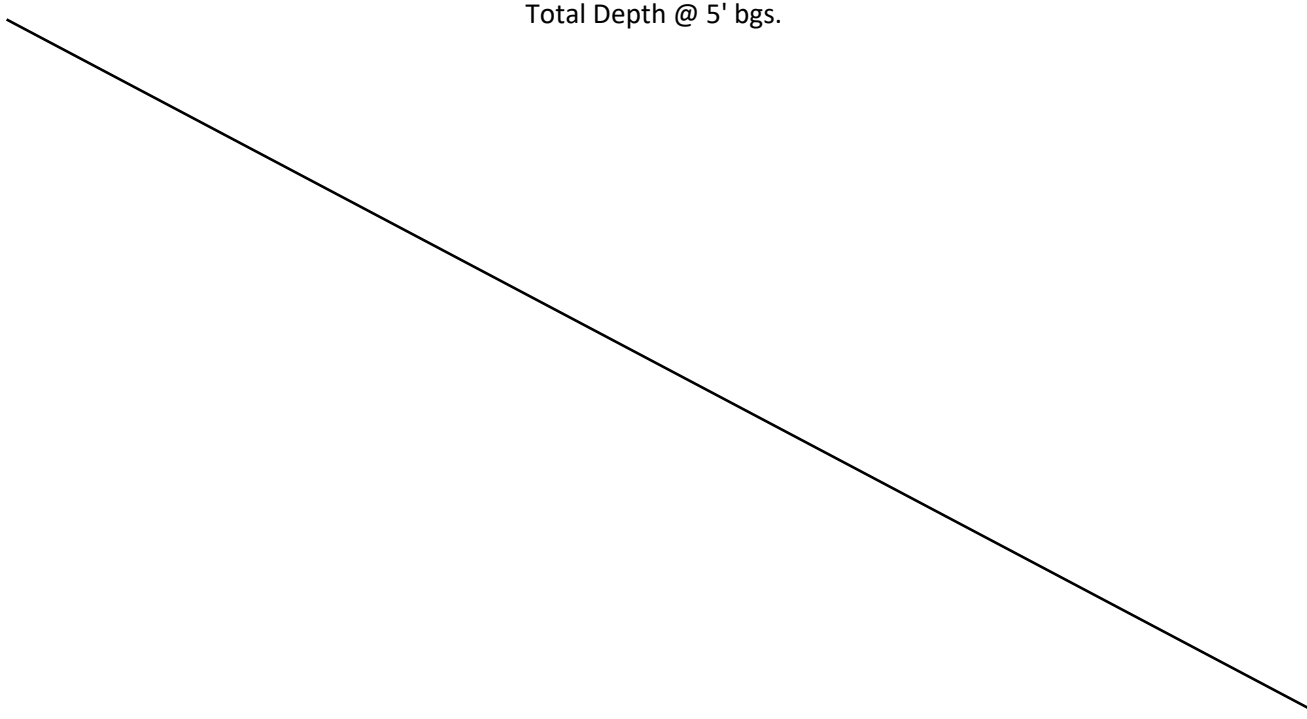



Photograph: 8 Date: 7/20/2024
Description: Backfilling activities
View: Northwest





APPENDIX C


Lithologic Soil Sampling Logs


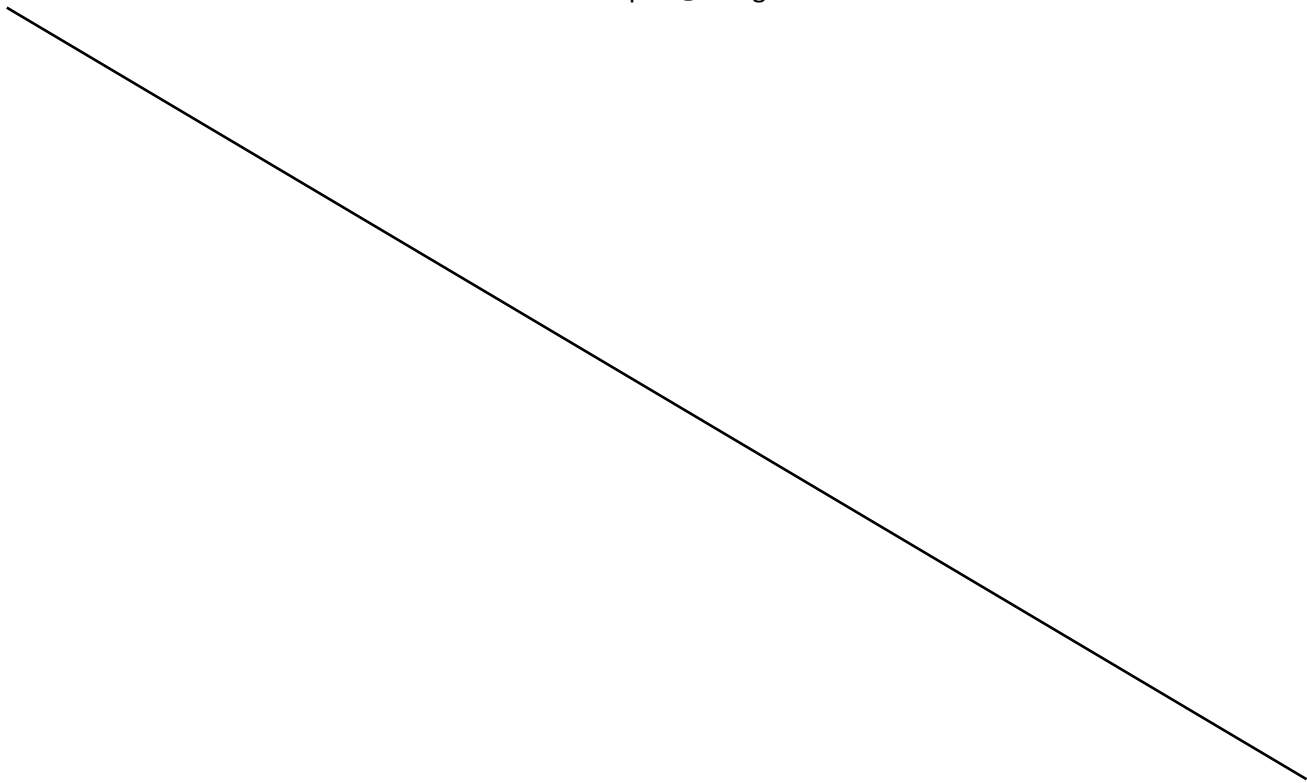
 ENSOLUM		Sample Name: PH01		Date: 5/30/2024				
		Site Name: Big Eddy Unit 34 Hackberry						
		Incident Number: nAPP2412351243						
		Job Number: 03C1558361						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.621758, -103.851603			Logged By: M. O'Dell		Method: Backhoe			
			Hole Diameter: ~3		Total Depth: 5'			
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. All chloride measurements are calculated with a +40% correction factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	274.4	584	Y	PH01	0.5		CCHE/SP	Caliche/Sand. Tan - brown, very fine to fine grained, poorly graded, dry, stained, strong odor.
D	274	92.5	Y		1	1		
D	235	89.5	Y		2	2	SP	Sand. Tan - brown, very fine to fine grained, poorly graded, strong odor, staining.
D	<162	2.6	N		3	3		
M	<162	0.0	N	PH01A	4	4		Moist, no odor.
M	<162	0.0	N		5	5	SP	Sand. Tan, very fine to fine grained, poorly graded, dry, no odor.
Total Depth @ 5' bgs.								

 ENSOLUM		Sample Name: PH02		Date: 5/30/2024				
		Site Name: Big Eddy Unit 34 Hackberry						
		Incident Number: nAPP2412351243						
		Job Number: 03C1558361						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.621898, -103.851566			Logged By: M. O'Dell		Method: Backhoe			
			Hole Diameter: ~3		Total Depth: 6'			
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. All chloride measurements are calculated with a +40% correction factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
W	767	1,635	Y	PH02	0.5		CCHE/SP	Caliche/Sand. Brown, very fine to fine grained, poorly graded, wet, stained, strong odor.
W	840	1,471	Y		1	1		
D	633	488	Y		2	2	SP	Sand. Tan - brown, very fine to fine grained, poorly graded, strong odor, staining, dry.
D	358	0.0	N		3	3		
D	1,182	23.5	N	PH02A	4	4	SP	Sand. Light brown, poorly graded, very fine to fine, no staining, odor, dry.
D	894	54.8	N		5	5		
D	235	0.0	N			6		Tan, no staining, slight odor.
Total Depth at 6' bgs.								

 ENSOLUM							Sample Name: PH03		Date: 5/30/2024	
							Site Name: Big Eddy Unit 34 Hackberry			
							Incident Number: nAPP2412351243			
							Job Number: 03C1558361			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: M. O'Dell		Method: Backhoe	
Coordinates: 32.621973, -103.851419							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. All chloride measurements are calculated with a +40% correction factor.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
D	403.2	601	N	PH03	0.5	0	CCHE/SP	Caliche/Sand. Brown, very fine to fine grained, poorly graded, wet, no staining, strong odor.		
D	454	52.5	N		1	1				
D	454	0.0	N		2	2	SP	Sand. Brown, very fine to fine grained, poorly graded, strong odor, no staining, dry.		
D	358	1.6	N		3	3				
D	454	1.9	N	PH03A	4	4	SP	Sand. Light brown, poorly graded, very fine to fine, no staining, odor, dry.		
Total Depth @ 4' bgs.										

 ENSOLUM		Sample Name: BH01		Date: 6/27/2024				
		Site Name: Big Eddy Unit 34 Hackberry						
		Incident Number: nAPP2412351243						
		Job Number: 03C1558361						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.621987, -103.851724				Logged By: Omar Hamdy				
				Method: Hand Auger				
				Hole Diameter: ~4"				
				Total Depth: 1'				
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. All chloride measurements are calculated with a +40% correction factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	403	0.0	N	BH01	0.5	0	CCHE/SP	Caliche/Sand. Brown, very fine to fine grained, poorly graded, dry, no staining, strong odor.
D	235	0.0	N	BH01A	1	1		
Total Depth @ 1' bgs.								

 ENSOLUM								Sample Name: BH02		Date: 6/27/2024	
								Site Name: Big Eddy Unit 34 Hackberry			
								Incident Number: nAPP2412351243			
								Job Number: 03C1558361			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Omar Hamdy		Method: Hand Auger	
Coordinates: 32.621838, -103.851732								Hole Diameter: ~4"		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. All chloride measurements are calculated with a +40% correction factor.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	403	0.0	N	BH02	0.5	0	CCHE/SP	Caliche/Sand. Brown, very fine to fine grained, poorly graded, dry, no staining, strong odor.			
D	168	0.0	N		1	1					
M	235	0.0	N	BH02A	2	2	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, odor, no staining, moist.			
Total Depth at 2' bgs											

 ENSOLUM		Sample Name: BH03		Date: 7/12/2024				
		Site Name: Big Eddy Unit 34 Hackberry						
		Incident Number: nAPP2412351243						
		Job Number: 03C1558361						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.621831, -103.851598			Logged By: M. O'Dell		Method: Hand Auger			
			Hole Diameter: ~4"		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride measurements are calculated with a +40% correction factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	2,358	0.0	N	BH03	0.5		CCHE/SP	Caliche/Sand. Brown, very fine to fine grained, poorly graded, dry, no staining, strong odor.
D	2,201	0.0	N		1	1		
M	571	0.0	N		2	2	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, odor, no staining, moist.
M	633	0.0	N		3	3		No odor
M	459	0.0	N	BH03A	4	4		
Total Depth @ 4' bgs.								



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



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

May 28, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: BIG EDDY UNIT 34 HACKBERRY

Enclosed are the results of analyses for samples received by the laboratory on 05/21/24 12:45.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/21/2024
Reported: 05/28/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/20/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 01 0' (H242785-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.805	0.200	05/22/2024	ND	2.05	102	2.00	3.68	
Toluene*	15.5	0.200	05/22/2024	ND	2.05	103	2.00	1.34	
Ethylbenzene*	17.4	0.200	05/22/2024	ND	2.10	105	2.00	0.0285	
Total Xylenes*	37.5	0.600	05/22/2024	ND	6.24	104	6.00	0.334	
Total BTX	71.2	1.20	05/22/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	05/22/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: ms						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	1620	50.0	05/21/2024	ND	212	106	200	2.41		
DRO >C10-C28*	45900	50.0	05/21/2024	ND	196	97.8	200	1.91		
EXT DRO >C28-C36	5490	50.0	05/21/2024	ND						

Surrogate: 1-Chlorooctane 293 % 48.2-134

Surrogate: 1-Chlorooctadecane 1100 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/21/2024
Reported: 05/28/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/20/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 02 0' (H242785-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.300	0.250	05/22/2024	ND	1.92	96.1	2.00	1.02	
Toluene*	6.37	0.500	05/22/2024	ND	1.91	95.5	2.00	2.51	QM-07
Ethylbenzene*	7.16	0.500	05/22/2024	ND	1.95	97.4	2.00	3.74	QM-07
Total Xylenes*	14.9	1.50	05/22/2024	ND	5.62	93.6	6.00	4.15	QM-07
Total BTEX	28.8	2.75	05/22/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	05/22/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: ms						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	459	50.0	05/21/2024	ND	212	106	200	2.41		
DRO >C10-C28*	34200	50.0	05/21/2024	ND	196	97.8	200	1.91		
EXT DRO >C28-C36	4840	50.0	05/21/2024	ND						

Surrogate: 1-Chlorooctane 174 % 48.2-134

Surrogate: 1-Chlorooctadecane 1060 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/21/2024
Reported: 05/28/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/20/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 03 0' (H242785-03)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.250	0.250	05/22/2024	ND	1.92	96.1	2.00	1.02	
Toluene*	0.915	0.500	05/22/2024	ND	1.91	95.5	2.00	2.51	
Ethylbenzene*	1.39	0.500	05/22/2024	ND	1.95	97.4	2.00	3.74	
Total Xylenes*	4.50	1.50	05/22/2024	ND	5.62	93.6	6.00	4.15	
Total BTEX	6.81	2.75	05/22/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	19400	16.0	05/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	227	50.0	05/21/2024	ND	212	106	200	2.41	
DRO >C10-C28*	39200	50.0	05/21/2024	ND	196	97.8	200	1.91	
EXT DRO >C28-C36	5230	50.0	05/21/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 1030 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/21/2024
Reported: 05/28/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/20/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 04 0' (H242785-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.250	0.250	05/22/2024	ND	1.92	96.1	2.00	1.02	
Toluene*	2.60	0.500	05/22/2024	ND	1.91	95.5	2.00	2.51	
Ethylbenzene*	4.33	0.500	05/22/2024	ND	1.95	97.4	2.00	3.74	
Total Xylenes*	10.5	1.50	05/22/2024	ND	5.62	93.6	6.00	4.15	
Total BTEx	17.4	2.75	05/22/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	17600	16.0	05/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	475	50.0	05/21/2024	ND	212	106	200	2.41	
DRO >C10-C28*	34500	50.0	05/21/2024	ND	196	97.8	200	1.91	
EXT DRO >C28-C36	4530	50.0	05/21/2024	ND					

Surrogate: 1-Chlorooctane 127 % 48.2-134

Surrogate: 1-Chlorooctadecane 867 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/21/2024
Reported: 05/28/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/20/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 05 0' (H242785-05)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.250	0.250	05/22/2024	ND	1.92	96.1	2.00	1.02		
Toluene*	0.935	0.500	05/22/2024	ND	1.91	95.5	2.00	2.51		
Ethylbenzene*	2.06	0.500	05/22/2024	ND	1.95	97.4	2.00	3.74		
Total Xylenes*	6.72	1.50	05/22/2024	ND	5.62	93.6	6.00	4.15		
Total BTEX	9.72	2.75	05/22/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11400	16.0	05/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	304	50.0	05/22/2024	ND	212	106	200	2.41	
DRO >C10-C28*	35800	50.0	05/22/2024	ND	196	97.8	200	1.91	
EXT DRO >C28-C36	4190	50.0	05/22/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 903 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/21/2024
Reported: 05/28/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/20/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 06 0' (H242785-06)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	6.33	0.500	05/22/2024	ND	1.92	96.1	2.00	1.02	
Toluene*	28.5	0.500	05/22/2024	ND	1.91	95.5	2.00	2.51	
Ethylbenzene*	17.3	0.500	05/22/2024	ND	1.95	97.4	2.00	3.74	
Total Xylenes*	36.9	1.50	05/22/2024	ND	5.62	93.6	6.00	4.15	
Total BTEX	89.1	3.00	05/22/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	992	16.0	05/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1610	50.0	05/22/2024	ND	212	106	200	2.41	
DRO >C10-C28*	41500	50.0	05/22/2024	ND	196	97.8	200	1.91	
EXT DRO >C28-C36	4710	50.0	05/22/2024	ND					

Surrogate: 1-Chlorooctane 226 % 48.2-134

Surrogate: 1-Chlorooctadecane 1090 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC		P.O. #:
Project Manager: Ben Bellill		Company: XTO Energy
Address: 3122 National Parks Hwy		Attn: Amy Ruth
City: Carlisbad		Address: 3104 E Cypress
State: NM Zip: 88220		City: Carlisbad
Phone #: Fax #:		State: NM Zip: 88220
Project #: 03C1558361		Project Owner: XTO
Project Name: Big Fiddy Unit 34 Hackberry		Phone #:
Project Location: 32.62201, -103.85107		Fax #:
Sample Name: Omar Hamdy		

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING
1B4285	SS01	0'	X		GROUNDWATER		DATE TIME
2	SS02		X		WASTEWATER		5/20/24 12:40
3	SS03		X		SOIL		12:45
4	SS04		X		OIL		12:50
5	SS05		X		SLUDGE		12:55
6	SS06		X		OTHER :		13:00
					ACID/BASE:		13:05
					ICE / COOL		
					OTHER :		

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Relinquished By: Omar Hamdy Date: 5/21/24 Received By: Speed Riquelme Time: 1245

Relinquished By: _____ Date: _____ Received By: _____ Time: _____

Delivered By: (Circle One) Observed Temp. °C 28.2 Sample Condition Cool Intact Yes No Checked BY: (Initials) Turnaround Time: Standard Rush Bacteria (only) Sample Condition Cool Intact Yes No Observed Temp. °C Corrected Temp. °C

Sampler - UPS - Bus - Other: Corrected Temp. °C

Thermometer ID #413-#140 Correction Factor .05°C

REMARKS: bbell@ensolum.com

Please email changes to caley.keene@cardinalabsnm.com



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

June 06, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: BIG EDDY UNIT 34 HACKBERRY

Enclosed are the results of analyses for samples received by the laboratory on 05/31/24 16:13.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2024
Reported: 06/06/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/30/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shari Cisneros

Sample ID: PH 01 0.5' (H243091-01)

BTX 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	06/05/2024	ND	1.97	98.3	2.00	8.85	
Toluene*	1.59	0.100	06/05/2024	ND	1.96	97.8	2.00	4.78	
Ethylbenzene*	8.60	0.100	06/05/2024	ND	1.94	97.2	2.00	4.19	
Total Xylenes*	31.4	0.300	06/05/2024	ND	5.67	94.5	6.00	4.37	
Total BTX	41.6	0.600	06/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 425 % 71.5-134

Chloride, SM4500CI-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	06/05/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	705	10.0	06/04/2024	ND	194	97.2	200	0.581	
DRO >C10-C28*	4520	10.0	06/04/2024	ND	182	91.2	200	1.41	
EXT DRO >C28-C36	694	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 175 % 48.2-134

Surrogate: 1-Chlorooctadecane 185 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2024
Reported: 06/06/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/30/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shari Cisneros

Sample ID: PH 01A 4' (H243091-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.97	98.3	2.00	8.85		
Toluene*	<0.050	0.050	06/05/2024	ND	1.96	97.8	2.00	4.78		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.94	97.2	2.00	4.19		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.67	94.5	6.00	4.37		
Total BTEX	<0.300	0.300	06/05/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/05/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	194	97.2	200	0.581	
DRO >C10-C28*	<10.0	10.0	06/04/2024	ND	182	91.2	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2024
Reported: 06/06/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/30/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shari Cisneros

Sample ID: PH 02 0.5' (H243091-03)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.97	1.00	06/05/2024	ND	1.94	97.2	2.00	2.64	GC-NC1
Toluene*	38.7	1.00	06/05/2024	ND	1.91	95.5	2.00	3.68	
Ethylbenzene*	39.8	1.00	06/05/2024	ND	1.77	88.4	2.00	6.68	
Total Xylenes*	93.2	3.00	06/05/2024	ND	5.51	91.8	6.00	6.85	
Total BTEX	174	6.00	06/05/2024	ND					GC-NC1

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	832	16.0	06/05/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	2240	10.0	06/04/2024	ND	194	97.2	200	0.581	
DRO >C10-C28*	6460	10.0	06/04/2024	ND	182	91.2	200	1.41	
EXT DRO >C28-C36	874	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 144 % 48.2-134

Surrogate: 1-Chlorooctadecane 208 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2024
Reported: 06/06/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/30/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shari Cisneros

Sample ID: PH 02A 3' (H243091-04)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2024	ND	1.94	97.2	2.00	2.64		
Toluene*	0.062	0.050	06/04/2024	ND	1.91	95.5	2.00	3.68		
Ethylbenzene*	<0.050	0.050	06/04/2024	ND	1.77	88.4	2.00	6.68		
Total Xylenes*	<0.150	0.150	06/04/2024	ND	5.51	91.8	6.00	6.85		
Total BTEX	<0.300	0.300	06/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	06/05/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	194	97.2	200	0.581	
DRO >C10-C28*	<10.0	10.0	06/04/2024	ND	182	91.2	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2024
Reported: 06/06/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/30/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shari Cisneros

Sample ID: PH 03 0.5' (H243091-05)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2024	ND	1.94	97.2	2.00	2.64		
Toluene*	0.210	0.050	06/04/2024	ND	1.91	95.5	2.00	3.68		
Ethylbenzene*	1.46	0.050	06/04/2024	ND	1.77	88.4	2.00	6.68		
Total Xylenes*	3.08	0.150	06/04/2024	ND	5.51	91.8	6.00	6.85		
Total BTEX	4.75	0.300	06/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	06/05/2024	ND	432	108	400	3.64	
TPH 8015M		mg/kg		Analyzed By: MS					
				S-04					

Surrogate: 1-Chlorooctane		119 %	48.2-134							
Surrogate: 1-Chlorooctadecane		173 %	49.1-148							

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 05/31/2024
Reported: 06/06/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 05/30/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shari Cisneros

Sample ID: PH 03A 4' (H243091-06)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2024	ND	1.94	97.2	2.00	2.64		
Toluene*	<0.050	0.050	06/04/2024	ND	1.91	95.5	2.00	3.68		
Ethylbenzene*	<0.050	0.050	06/04/2024	ND	1.77	88.4	2.00	6.68		
Total Xylenes*	<0.150	0.150	06/04/2024	ND	5.51	91.8	6.00	6.85		
Total BTEX	<0.300	0.300	06/04/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	06/05/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	194	97.2	200	0.581	
DRO >C10-C28*	37.2	10.0	06/04/2024	ND	182	91.2	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 1

[illegible]



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

June 07, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: BIG EDDY UNIT 34 HACKBERRY

Enclosed are the results of analyses for samples received by the laboratory on 06/03/24 16:23.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a light gray rectangular background.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/03/2024
 Reported: 06/07/2024
 Project Name: BIG EDDY UNIT 34 HACKBERRY
 Project Number: 03C1558361
 Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: FS 01 4' (H243120-01)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTX	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	06/06/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	<10.0	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 83.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.2 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/03/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 02 4' (H243120-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTEX	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	06/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	39.9	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.8 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/03/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SW 01 0-4' (H243120-03)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294	
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939	
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47	
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59	
Total BTEX	<0.300	0.300	06/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	06/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	62.2	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	15.2	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 94.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.6 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/03/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SW 02 0-4' (H243120-04)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294	
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939	
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47	
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59	
Total BTEX	<0.300	0.300	06/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	06/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	362	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	135	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 98.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/03/2024
 Reported: 06/07/2024
 Project Name: BIG EDDY UNIT 34 HACKBERRY
 Project Number: 03C1558361
 Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: FS 03 4' (H243120-05)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTEX	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	06/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	28.4	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.0 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/03/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 04 4' (H243120-06)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTEX	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2480	16.0	06/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	122	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	35.4	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/03/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SW 03 0-4' (H243120-07)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTEx	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	06/06/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	18.8	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/03/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SW 04 0-4' (H243120-08)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTEX	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	06/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	<10.0	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 80.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.9 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/03/2024
 Reported: 06/07/2024
 Project Name: BIG EDDY UNIT 34 HACKBERRY
 Project Number: 03C1558361
 Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: FS 05 4' (H243120-09)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTEX	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	06/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	12.9	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	<10.0	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 90.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.2 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/03/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 06 4' (H243120-10)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTEX	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	624	16.0	06/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	38.4	10.0	06/04/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	15.1	10.0	06/04/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/03/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 07 4' (H243120-11)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTEX	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	576	16.0	06/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	<10.0	10.0	06/05/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	<10.0	10.0	06/05/2024	ND					

Surrogate: 1-Chlorooctane 98.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/03/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/03/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 08 4' (H243120-12)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/05/2024	ND	1.92	96.2	2.00	0.294		
Toluene*	<0.050	0.050	06/05/2024	ND	1.92	96.1	2.00	0.939		
Ethylbenzene*	<0.050	0.050	06/05/2024	ND	1.79	89.5	2.00	1.47		
Total Xylenes*	<0.150	0.150	06/05/2024	ND	5.60	93.4	6.00	1.59		
Total BTEX	<0.300	0.300	06/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	06/06/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2024	ND	190	94.8	200	2.88	
DRO >C10-C28*	13.5	10.0	06/05/2024	ND	214	107	200	2.55	
EXT DRO >C28-C36	<10.0	10.0	06/05/2024	ND					

Surrogate: 1-Chlorooctane 94.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.0 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

June 07, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: BIG EDDY UNIT 34 HACKBERRY

Enclosed are the results of analyses for samples received by the laboratory on 06/04/24 15:58.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 09 4' (H243169-01)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/06/2024	ND	1.95	97.7	2.00	1.48		
Toluene*	<0.050	0.050	06/06/2024	ND	2.00	100	2.00	1.12		
Ethylbenzene*	<0.050	0.050	06/06/2024	ND	2.00	100	2.00	0.769		
Total Xylenes*	<0.150	0.150	06/06/2024	ND	5.85	97.6	6.00	0.731		
Total BTX	<0.300	0.300	06/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	06/07/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 73.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.4 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 10 4' (H243169-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEX	<0.300	0.300	06/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	06/07/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	19.1	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 73.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.7 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 11 4' (H243169-03)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEX	<0.300	0.300	06/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	592	16.0	06/07/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	47.3	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 81.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SW 05 0-4' (H243169-04)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEX	<0.300	0.300	06/07/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	06/07/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 77.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.3 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 12 4' (H243169-05)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEX	<0.300	0.300	06/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	06/07/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	38.0	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 73.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.0 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 13 4' (H243169-06)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEX	<0.300	0.300	06/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	736	16.0	06/07/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	14.1	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 75.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.8 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SW 06 0-4' (H243169-07)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEX	<0.300	0.300	06/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	06/07/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	16.7	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 73.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.3 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SW 07 0-4' (H243169-08)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEX	<0.300	0.300	06/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	928	16.0	06/07/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 60.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.6 % 49.1-148

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*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 14 4' (H243169-09)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEX	<0.300	0.300	06/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	06/07/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 77.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.8 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 15 4' (H243169-10)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEx	<0.300	0.300	06/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	06/07/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 98.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2024
Reported: 06/07/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.62201, -103.85107

Sampling Date: 06/04/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: FS 16 4' (H243169-11)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/07/2024	ND	2.03	102	2.00	4.26		
Toluene*	<0.050	0.050	06/07/2024	ND	2.15	107	2.00	4.13		
Ethylbenzene*	<0.050	0.050	06/07/2024	ND	2.19	109	2.00	4.30		
Total Xylenes*	<0.150	0.150	06/07/2024	ND	6.71	112	6.00	3.93		
Total BTEX	<0.300	0.300	06/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	06/07/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2024	ND	206	103	200	0.291	
DRO >C10-C28*	<10.0	10.0	06/06/2024	ND	202	101	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	06/06/2024	ND					

Surrogate: 1-Chlorooctane 82.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Mike Snyder".

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC						P.O. #:						BILL TO						ANALYSIS REQUEST					
Project Manager: Ben Bellini						Address: 604 N. Mainfield St STE 400-3122 National Parks Hwy						Company: XTO Energy											
City: Midland Carlsbad						State: TX Zip: 79704-88220						Attn: Amy Ruth											
Phone #: 989-854-0852 Fax #:						Project Owner:						Address: 3104 E. Greenest											
Project #: 03615583101						City: Carlsbad						State: NM Zip: 88220											
Project Location: 32.021892,-103.851520						Phone #:																	
Sample Name: Mariah O'Dell						Fax #:																	
FOR LAB USE ONLY						MATRIX						PRESERV						SAMPLING					
Lab I.D.						Sample Depth (feet)						(G)RAB OR (C)OMP.						# CONTAINERS					
H243404						F509						GROUNDWATER						WASTEWATER					
1						F510						SOIL						OIL					
2						F511						SLUDGE						OTHER :					
3						F512						ACID/BASE:						ICE / COOL					
4						F513						OTHER :						DATE					
5						F514						TIME						Chlorides					
6						F515						X						TPH					
7						F516						X						BTEX					
8						F517						X											
9						F518						X											
10						F519						X											
11						F520						X											
12						F521						X											
13						F522						X											
14						F523						X											
15						F524						X											
16						F525						X											
17						F526						X											
18						F527						X											
19						F528						X											
20						F529						X											
21						F530						X											
22						F531						X											
23						F532						X											
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32						F541						X											
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58						F567						X											
59						F568						X											
60						F569						X											
61						F570						X											
62						F571						X											
63						F572						X											
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67						F576						X											
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69						F578						X											
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81						F590						X											
82						F591						X											
83						F592						X											
84</																							



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Ben Bell

Address: 604 N. Marientfield St. STE 400 3122 National Parks Hwy

City: Midland Carlsbad State: NM Zip: 79701 88220

Phone #: 989-854-0852 Fax #:

Project #: 0361558361 Project Owner:

Project Name: Big Eddy Unit 34 Hackberry

Project Location: 32.621892, -103.851520

Sampler Name: Mariana O'Dell

P.O. #:

Company: XTO Energy

Attn: Amy Ruth

Address: 3104 E. Greenest

City: Carlsbad

State: NM Zip: 88220

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Sample Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

MATRIX
GROUNDWATER
WASTEWATER
SOIL
OIL
SLUDGE
OTHER :
ACID/BASE:
ICE / COOL
OTHER :

PRESERV.

SAMPLING

DATE

TIME

Chlorides
TPH
BTEX

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Relinquished By:

Received By:

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

All Results are emailed. Please provide Email address:

Bellings@ensolum.com bell@ensolum.com model@ensolum.com

Relinquished By:

Received By:

REMARKS: Incident #: NAPP2412351243

Facility ID: FAPP2126341465

Cost Center: 1082441001

Turnaround Time:

Standard

☒

Bacteria (only)

Sample Condition

Observed Temp. °C

Delivered By: (Circle One)

Observed Temp. °C

Sample Condition

CHECKED BY: (Initials)

Thermometer ID #443

Correction Factor -0.5°C

Cool Intact

Corrected Temp. °C

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



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

July 05, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: BIG EDDY UNIT 34 HACKBERRY

Enclosed are the results of analyses for samples received by the laboratory on 06/28/24 11:31.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/28/2024
Reported: 07/05/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.621919-103.851519

Sampling Date: 06/27/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: BH 01 0.5' (H243893-01)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/04/2024	ND	1.98	99.1	2.00	5.75	
Toluene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	5.95	
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	6.68	
Total Xylenes*	<0.150	0.150	07/04/2024	ND	6.60	110	6.00	6.18	
Total BTX	<0.300	0.300	07/04/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	07/03/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2024	ND	199	99.4	200	3.66	
DRO >C10-C28*	111	10.0	07/02/2024	ND	181	90.4	200	2.92	
EXT DRO >C28-C36	55.3	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane 95.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/28/2024
Reported: 07/05/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.621919-103.851519

Sampling Date: 06/27/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: BH 01 1' (H243893-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/04/2024	ND	1.98	99.1	2.00	5.75		
Toluene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	5.95		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	6.68		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	6.60	110	6.00	6.18		
Total BTEx	<0.300	0.300	07/04/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	07/03/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2024	ND	199	99.4	200	3.66	
DRO >C10-C28*	359	10.0	07/02/2024	ND	181	90.4	200	2.92	
EXT DRO >C28-C36	231	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane 98.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/28/2024
Reported: 07/05/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.621919-103.851519

Sampling Date: 06/27/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: BH 02 0.5' (H243893-03)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/04/2024	ND	1.98	99.1	2.00	5.75		
Toluene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	5.95		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	6.68		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	6.60	110	6.00	6.18		
Total BTEx	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	07/03/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/03/2024	ND	199	99.4	200	3.66	
DRO >C10-C28*	481	10.0	07/03/2024	ND	181	90.4	200	2.92	
EXT DRO >C28-C36	316	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/28/2024
Reported: 07/05/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.621919-103.851519

Sampling Date: 06/27/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: BH 02 1' (H243893-04)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/04/2024	ND	1.98	99.1	2.00	5.75		
Toluene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	5.95		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	6.68		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	6.60	110	6.00	6.18		
Total BTEx	<0.300	0.300	07/04/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	07/03/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/03/2024	ND	199	99.4	200	3.66	
DRO >C10-C28*	291	10.0	07/03/2024	ND	181	90.4	200	2.92	
EXT DRO >C28-C36	198	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 99.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/28/2024
Reported: 07/05/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.621919-103.851519

Sampling Date: 06/27/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: BH 02 2' (H243893-05)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/04/2024	ND	1.98	99.1	2.00	5.75		
Toluene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	5.95		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	6.68		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	6.60	110	6.00	6.18		
Total BTEx	<0.300	0.300	07/04/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	07/03/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/03/2024	ND	199	99.4	200	3.66	
DRO >C10-C28*	264	10.0	07/03/2024	ND	181	90.4	200	2.92	
EXT DRO >C28-C36	163	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 92.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager

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

[illegible]

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Relinquished By: _____ Date: _____ Received By: _____

Requisitioned By:					
Date: _____ Time: _____					
Received By:					
Date: _____ Time: _____					
Delivered By: (Circle One)	Observed Temp. °C Corrected Temp. °C	Sample Condition <input type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other:					
REMARKS:					
Cost Center: 1082461001					
Turnaround Time:		Standard <input checked="" type="checkbox"/>			
Thermometer ID		Rush <input type="checkbox"/>			
Correction Factor		Bacteria (only) Sample Condition			
		Cool Intact <input type="checkbox"/>			
		Yes <input type="checkbox"/> No <input type="checkbox"/>			
		Observed Temp. °C			
		Corrected Temp. °C			

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

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

July 23, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: BIG EDDY UNIT 34 HACKBERRY

Enclosed are the results of analyses for samples received by the laboratory on 07/12/24 15:14.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at

www.tceq.texas.gov/field/ga/lab_accred_certif.html.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Manager: BEN BELILL
Fax To:

Reported:
23-Jul-24 15:19

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 17 4'	H244184-01	Soil	12-Jul-24 08:45	12-Jul-24 15:14
SW 08 0-4'	H244184-02	Soil	12-Jul-24 08:40	12-Jul-24 15:14

07/23/24 - Client changed the sample ID on -02 (see COC). This is the revised report and will replace the one sent on 07/15/24.

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Manager: BEN BELILL
Fax To:

Reported:
23-Jul-24 15:19

FS 17 4'
H244184-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	352		16.0	mg/kg	4	4071513	CT	15-Jul-24	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	4071237	JH	13-Jul-24	8021B	
Toluene*	<0.050	0.050	mg/kg	50	4071237	JH	13-Jul-24	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	4071237	JH	13-Jul-24	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	4071237	JH	13-Jul-24	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	4071237	JH	13-Jul-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)	112 %	71.5-134	4071237	JH	13-Jul-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	4071202	MS	13-Jul-24	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	4071202	MS	13-Jul-24	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	4071202	MS	13-Jul-24	8015B	

Surrogate: 1-Chlorooctane	133 %	48.2-134	4071202	MS	13-Jul-24	8015B	
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Surrogate: 1-Chlorooctadecane	143 %	49.1-148	4071202	MS	13-Jul-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Manager: BEN BELILL
Fax To:

Reported:
23-Jul-24 15:19

SW 08 0-4'
H244184-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	160		16.0	mg/kg	4	4071513	CT	15-Jul-24	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	4071237	JH	13-Jul-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4071237	JH	13-Jul-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4071237	JH	13-Jul-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4071237	JH	13-Jul-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4071237	JH	13-Jul-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			124 %		71.5-134	4071237	JH	13-Jul-24	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	4071202	MS	13-Jul-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4071202	MS	13-Jul-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4071202	MS	13-Jul-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			124 %		48.2-134	4071202	MS	13-Jul-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			134 %		49.1-148	4071202	MS	13-Jul-24	8015B	
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Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Manager: BEN BELILL
Fax To:

Reported:
23-Jul-24 15:19

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 4071513 - 1:4 DI Water									
Blank (4071513-BLK1)					Prepared & Analyzed: 15-Jul-24				
Chloride	ND	16.0	mg/kg						
LCS (4071513-BS1)					Prepared & Analyzed: 15-Jul-24				
Chloride	432	16.0	mg/kg	400		108	80-120		
LCS Dup (4071513-BSD1)					Prepared & Analyzed: 15-Jul-24				
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Manager: BEN BELILL
Fax To:

Reported:
23-Jul-24 15:19

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4071237 - Volatiles**Blank (4071237-BLK1)**

Prepared & Analyzed: 12-Jul-24

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0581		mg/kg	0.0500		116	71.5-134			

LCS (4071237-BS1)

Prepared & Analyzed: 12-Jul-24

Benzene	2.24	0.050	mg/kg	2.00		112	82.8-130			
Toluene	2.34	0.050	mg/kg	2.00		117	86-128			
Ethylbenzene	2.52	0.050	mg/kg	2.00		126	85.9-128			
m,p-Xylene	5.18	0.100	mg/kg	4.00		129	89-129			
o-Xylene	2.58	0.050	mg/kg	2.00		129	86.1-125			BS-3
Total Xylenes	7.75	0.150	mg/kg	6.00		129	88.2-128			BS-3
Surrogate: 4-Bromofluorobenzene (PID)	0.0579		mg/kg	0.0500		116	71.5-134			

LCS Dup (4071237-BSD1)

Prepared & Analyzed: 12-Jul-24

Benzene	2.26	0.050	mg/kg	2.00		113	82.8-130	0.879	15.8	
Toluene	2.31	0.050	mg/kg	2.00		116	86-128	1.00	15.9	
Ethylbenzene	2.47	0.050	mg/kg	2.00		123	85.9-128	2.28	16	
m,p-Xylene	5.05	0.100	mg/kg	4.00		126	89-129	2.56	16.2	
o-Xylene	2.50	0.050	mg/kg	2.00		125	86.1-125	3.23	16.7	
Total Xylenes	7.54	0.150	mg/kg	6.00		126	88.2-128	2.78	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0557		mg/kg	0.0500		111	71.5-134			

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Manager: BEN BELILL
Fax To:

Reported:
23-Jul-24 15:19

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 4071202 - General Prep - Organics**Blank (4071202-BLK1)**

Prepared: 12-Jul-24 Analyzed: 13-Jul-24

GRO C6-C10	ND	10.0	mg/kg						
DRO >C10-C28	ND	10.0	mg/kg						
EXT DRO >C28-C36	ND	10.0	mg/kg						
Surrogate: 1-Chlorooctane	47.4		mg/kg	50.0		94.8		48.2-134	
Surrogate: 1-Chlorooctadecane	48.8		mg/kg	50.0		97.6		49.1-148	

LCS (4071202-BS1)

Prepared: 12-Jul-24 Analyzed: 13-Jul-24

GRO C6-C10	223	10.0	mg/kg	200		111		66.4-123	
DRO >C10-C28	219	10.0	mg/kg	200		110		66.5-118	
Total TPH C6-C28	442	10.0	mg/kg	400		110		77.6-123	
Surrogate: 1-Chlorooctane	51.2		mg/kg	50.0		102		48.2-134	
Surrogate: 1-Chlorooctadecane	52.4		mg/kg	50.0		105		49.1-148	

LCS Dup (4071202-BSD1)

Prepared: 12-Jul-24 Analyzed: 13-Jul-24

GRO C6-C10	216	10.0	mg/kg	200		108		66.4-123	2.88	17.7
DRO >C10-C28	203	10.0	mg/kg	200		101		66.5-118	7.75	21
Total TPH C6-C28	419	10.0	mg/kg	400		105		77.6-123	5.27	18.5
Surrogate: 1-Chlorooctane	49.5		mg/kg	50.0		99.1		48.2-134		
Surrogate: 1-Chlorooctadecane	52.0		mg/kg	50.0		104		49.1-148		

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

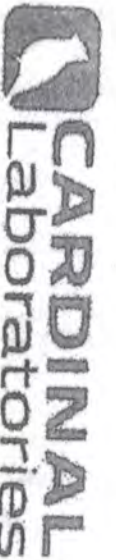
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient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

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Ben Belli

Address: 3122 National Parks Hwy

City: Carlsbad

State: NM Zip: 88220

Phone #: (989) 854-0852 Fax #:

Project #: 03GL558301 Project Owner:

Project Name: Big Eddy Unit 34 Hackberry

Project Location: 32.1821892 -103.8515203

Sampler Name: Mariana O'bell

P.O. #:

Company: XTO Energy
Attn: Amy Ruth

Address: 3104 E. Greene St

City: Carlsbad

State: NM Zip: 88220

Phone #:

Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Depth (feet)

#844184

1

ES17

SMD-18*

BH03

BH03A

4'

0-4'

0-5'

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

July 18, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: BIG EDDY UNIT 34 HACKBERRY

Enclosed are the results of analyses for samples received by the laboratory on 07/12/24 15:14.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/12/2024
Reported: 07/18/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.621892,-103.851520

Sampling Date: 07/12/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: BH 03 0.5' (H244187-01)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2024	ND	2.10	105	2.00	4.24	
Toluene*	<0.050	0.050	07/18/2024	ND	2.28	114	2.00	4.58	
Ethylbenzene*	<0.050	0.050	07/18/2024	ND	2.35	118	2.00	5.47	
Total Xylenes*	<0.150	0.150	07/18/2024	ND	7.29	122	6.00	4.59	
Total BTEX	<0.300	0.300	07/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	07/16/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2024	ND	181	90.5	200	6.12	
DRO >C10-C28*	379	10.0	07/16/2024	ND	176	88.2	200	11.5	
EXT DRO >C28-C36	228	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/12/2024
Reported: 07/18/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.621892,-103.851520

Sampling Date: 07/12/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: BH 03A 4' (H244187-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/15/2024	ND	2.10	105	2.00	4.24		
Toluene*	<0.050	0.050	07/15/2024	ND	2.28	114	2.00	4.58		
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.35	118	2.00	5.47		
Total Xylenes*	<0.150	0.150	07/15/2024	ND	7.29	122	6.00	4.59		
Total BTEX	<0.300	0.300	07/15/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	07/16/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2024	ND	181	90.5	200	6.12	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	176	88.2	200	11.5	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

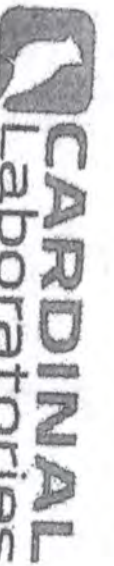
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A handwritten signature in black ink, appearing to read "C. D. Keene".

Celey D. Keene, Lab Director/Quality Manager



101 East Merland, Hobbs, NM 88240
(575) 383-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Project Manager: Ben Bellini		P.O. #:		ANALYSIS REQUEST					
Address: 3122 National Parks Hwy		Company: XTO Energy							
City: Carlsbad		Attn: 3104 E. Greene St							
Phone #: (989) 854-0852		State: NM							
Zip: 88220		City: Carlsbad							
Project #: 03C1558301		Project Owner:							
Project Name: Big Eddy Unit 34 Hackberry		State: NM							
Project Location: 32.1021892, -103.851520		Zip: 88220							
Sampler Name: Mariaha O'Dell		Phone #:							
FOR LAB USE ONLY		Matrix:							
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (G)OMP.		DATE	TIME	Chlorides	TPH	BTEX
			# CONTAINERS						
H244187	BH03 BH03A	0.5' 4'	GROUNDWATER		11/24/24	12:00	X	X	X
			WASTEWATER						
2			SOIL						
			OIL						
			SLUDGE						
			OTHER :						
			ACID/BASE:						
			ICE / COOL						
			OTHER :						
Relinquished By:		Date: 11/24	Received By: S. Deloigne						
Relinquished By:		Time: 15:14	Received By:						
Delivered By: (Circle One)		Observed Temp. °C: 5.5	Sample Condition:						
Sampler - UPS - Bus - Other:		Corrected Temp. °C:	Checked By:						
			Incident #:						
			Remarks:						
			Facility ID:						
			Incident #:						
			Cost center:						
			Turnaround Time:						
			Thermometer ID:						
			Correction Factor:						
			Bacteria (only) Sample Condition:						
			Cool Intact:						
			Observed Temp. °C:						
			Corrected Temp. °C:						



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

July 24, 2024

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: BIG EDDY UNIT 34 HACKBERRY

Enclosed are the results of analyses for samples received by the laboratory on 07/23/24 16:23.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/23/2024
Reported: 07/24/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.621892,-103.851520

Sampling Date: 07/23/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SS07 0.5' (H244383-01)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/24/2024	ND	1.99	99.5	2.00	4.09	
Toluene*	<0.050	0.050	07/24/2024	ND	1.96	97.9	2.00	4.00	
Ethylbenzene*	<0.050	0.050	07/24/2024	ND	1.98	99.2	2.00	4.19	
Total Xylenes*	<0.150	0.150	07/24/2024	ND	5.87	97.9	6.00	3.87	
Total BTEx	<0.300	0.300	07/24/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	07/24/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/24/2024	ND	212	106	200	1.24	
DRO >C10-C28*	<10.0	10.0	07/24/2024	ND	198	98.8	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	07/24/2024	ND					

Surrogate: 1-Chlorooctane 128 % 48.2-134

Surrogate: 1-Chlorooctadecane 143 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/23/2024
Reported: 07/24/2024
Project Name: BIG EDDY UNIT 34 HACKBERRY
Project Number: 03C1558361
Project Location: XTO 32.621892,-103.851520

Sampling Date: 07/23/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Alyssa Parras

Sample ID: SS08 0.5' (H244383-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/24/2024	ND	1.99	99.5	2.00	4.09		
Toluene*	<0.050	0.050	07/24/2024	ND	1.96	97.9	2.00	4.00		
Ethylbenzene*	<0.050	0.050	07/24/2024	ND	1.98	99.2	2.00	4.19		
Total Xylenes*	<0.150	0.150	07/24/2024	ND	5.87	97.9	6.00	3.87		
Total BTEx	<0.300	0.300	07/24/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	07/24/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/24/2024	ND	212	106	200	1.24	
DRO >C10-C28*	<10.0	10.0	07/24/2024	ND	198	98.8	200	1.71	
EXT DRO >C28-C36	<10.0	10.0	07/24/2024	ND					

Surrogate: 1-Chlorooctane 132 % 48.2-134

Surrogate: 1-Chlorooctadecane 139 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.


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


Celey D. Keene, Lab Director/Quality Manager



APPENDIX B

Lithologic Soil Sampling Logs

 ENSOLUM		Sample Name: BH04		Date: 2/3/2025				
		Site Name: Big Eddy Hackberry 34 Battery						
		Incident Number: nAPP2408932392						
		Job Number: 03C1558508						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.6218664, -103.8516721			Logged By: Evan Roe		Method: Hand auger			
			Hole Diameter: 2.5"		Total Depth: 7'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	196	95.5	Y	BH04	0.5	0	CCHE/SP	Caliche/Sand. Tan - brown, very fine to fine grained, poorly graded, dry, stained, strong odor.
D	515	11.2	Y		1	1		
D	515	21.1	Y	BH04	2	2	SP	Sand. Tan - brown, very fine to fine grained, poorly graded, strong odor, staining.
D	996.8	10.5	N	BH04	3	3		
M	1,713	18.5	N		4	4		
M	1,590	14.5	N		5	5	SP	Sand. Tan, very fine to fine grained, poorly graded, dry, no odor.
D	182	18.1	N		6	6		
D	515	12.4	N	BH04	7	7		
						Total depth @ 7 feet bgs		

 ENSOLUM		Sample Name: BH05		Date: 2/3/2025				
		Site Name: Big Eddy Hackberry 34 Battery						
		Incident Number: nAPP2408932392						
		Job Number: 03C1558508						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.6219606, -103.8516600			Logged By: Evan Roe		Method: Hand auger			
			Hole Diameter: 2.5"		Total Depth: 8'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor is included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<162	8.1	N	BH05	0.5	0	CCHE/SP	Caliche/Sand. Tan - brown, very fine to fine grained, poorly graded, dry, stained, strong odor.
D	196	2.0	N		1	1		
D	<162	6.1	N		2	2	SP	Sand. Tan - brown, very fine to fine grained, poorly graded, strong odor, staining.
D	<162	5.0	N		3	3		
M	<162	1.2	N	BH05	4	4	SP	Moist, no odor.
M	<162	2.9	N	BH05	5	5		Sand. Tan, very fine to fine grained, poorly graded, dry, no odor.
D	<162	4.1	N		6	6		
D	<162	3.2	N		7	7		
D	<162	4.6	N	BH05	8	8		
						Total depth at 8' bgs.		



APPENDIX C

Photographic Log



Photographic Log

XTO Energy, Inc.
Big Eddy Hackberry 34 Battery
NAPP2408932392



Photograph 1

Date: February 3, 2025

Description: Delineation activities near BH05 facing East



Photograph 2

Date: February 3, 2025

Description: Delineation activities near BH04 facing South



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



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

February 06, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: BIG EDDY HACKBERRY 34 BES

Enclosed are the results of analyses for samples received by the laboratory on 02/04/25 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
 TRACY HILLARD
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received: 02/04/2025
 Reported: 02/06/2025
 Project Name: BIG EDDY HACKBERRY 34 BES
 Project Number: 03C1558508
 Project Location: XTO 32.62184-103.85159

Sampling Date: 02/03/2025
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH 04 0.5' (H250656-01)

BTEx 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/05/2025	ND	2.34	117	2.00	0.167	
Toluene*	<0.050	0.050	02/05/2025	ND	2.27	113	2.00	0.0601	
Ethylbenzene*	1.05	0.050	02/05/2025	ND	2.41	120	2.00	3.09	GC-NC1
Total Xylenes*	1.54	0.150	02/05/2025	ND	7.25	121	6.00	4.17	QM-07
Total BTEX	2.58	0.300	02/05/2025	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 235 % 71.5-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	02/05/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	109	10.0	02/05/2025	ND	182	91.2	200	0.270	
DRO >C10-C28*	4390	10.0	02/05/2025	ND	188	94.2	200	0.312	QM-07, QR-03
EXT DRO >C28-C36	1020	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane 89.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
 TRACY HILLARD
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received: 02/04/2025
 Reported: 02/06/2025
 Project Name: BIG EDDY HACKBERRY 34 BES
 Project Number: 03C1558508
 Project Location: XTO 32.62184-103.85159

Sampling Date: 02/03/2025
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH 04 2' (H250656-02)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/05/2025	ND	2.34	117	2.00	0.167		
Toluene*	<0.050	0.050	02/05/2025	ND	2.27	113	2.00	0.0601		
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.41	120	2.00	3.09		
Total Xylenes*	<0.150	0.150	02/05/2025	ND	7.25	121	6.00	4.17		
Total BTEX	<0.300	0.300	02/05/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	02/05/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2025	ND	182	91.2	200	0.270	
DRO >C10-C28*	136	10.0	02/05/2025	ND	188	94.2	200	0.312	
EXT DRO >C28-C36	52.6	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane 74.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.9 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC		BILL TO		ANALYSIS REQUEST	
Project Manager: <i>Tracy Hillard</i>		P.O. #:			
Address: 601 N Marland Street, Suite 400		Company: XTO Energy, Inc			
City: Midland 575 937 3406		Attn: Colton Brown			
State: TX Zip: 79701		Address: 3104 E Greene St			
Phone #: 575 937 3406		City: Carlsbad			
Project #: 036155 8508		State: NM Zip: 88220			
Project Name: <i>Big Beddy Trucking 34 Box</i>		Phone #:			
Project Location: <i>32.62184, -103.85159</i>		Fax #:			
Sampler Name: <i>Tracy Hillard</i>					

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
<i>4250656</i>	<i>134104</i>	<i>2.5</i>	<i>Q1</i>	<i>1</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>24/12/25</i>	<i>1530</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>
	<i>134104</i>	<i>21</i>	<i>Q1</i>	<i>1</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>24/12/25</i>	<i>1142</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>

PLEASE NOTE: Liability and claims, including but not limited to, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits, incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <i>Tracy Hillard</i>	Date: <i>12/24/25</i>	Received By: <i>Tracy Hillard</i>	Date: <i>12/24/25</i>
Relinquished By: <i>Tracy Hillard</i>	Date: <i>12/24/25</i>	Received By: <i>Tracy Hillard</i>	Date: <i>12/24/25</i>

Delivered By: (Circle One) ☒ O ☐ C ☐ S ☐ B ☐ O ☐ T

Sampler - UPS - Bus - Other: ☐ Corrected Temp.: *0.0*

Observed Temp.: *-0.3*

Sample Condition: ☒ Cool ☐ Intact ☐ Yes ☐ No

CHECKED BY: *Tracy Hillard*

Turnaround Time: *14* Standard ☐ Rush ☒ *14* *14*

Thermometer ID: *4448*

Correction Factor: *0.05*

Bacteria (only) Sample Condition: ☐ Cool ☐ Intact ☐ Yes ☐ No

Corrected Temp.: *0.0*

REMARKS: *BBell@ensolum.com, TMorrissey@ensolum.com, THillard@ensolum.com*

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



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

February 06, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: BIG EDDY HACKBERRY 34 BES

Enclosed are the results of analyses for samples received by the laboratory on 02/04/25 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
 TRACY HILLARD
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received: 02/04/2025
 Reported: 02/06/2025
 Project Name: BIG EDDY HACKBERRY 34 BES
 Project Number: 03C1558508
 Project Location: XTO 32.62184-103.85159

Sampling Date: 02/03/2025
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH 04 3' (H250657-01)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/05/2025	ND	2.34	117	2.00	0.167	
Toluene*	<0.050	0.050	02/05/2025	ND	2.27	113	2.00	0.0601	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.41	120	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	7.25	121	6.00	4.17	
Total BTEX	<0.300	0.300	02/05/2025	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	02/05/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2025	ND	182	91.2	200	0.270	
DRO >C10-C28*	42.2	10.0	02/05/2025	ND	188	94.2	200	0.312	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane 81.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
 TRACY HILLARD
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received: 02/04/2025
 Reported: 02/06/2025
 Project Name: BIG EDDY HACKBERRY 34 BES
 Project Number: 03C1558508
 Project Location: XTO 32.62184-103.85159

Sampling Date: 02/03/2025
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH 04 7' (H250657-02)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/05/2025	ND	2.34	117	2.00	0.167	
Toluene*	<0.050	0.050	02/05/2025	ND	2.27	113	2.00	0.0601	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.41	120	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	7.25	121	6.00	4.17	
Total BTX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	02/05/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2025	ND	182	91.2	200	0.270	
DRO >C10-C28*	73.4	10.0	02/05/2025	ND	188	94.2	200	0.312	
EXT DRO >C28-C36	18.9	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane 81.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.8 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC		Project Manager:		P.O. #:		ANALYSIS REQUEST													
Address: 601 N Marlenfeld Street, Suite 400		City: Midland		State: TX Zip: 79701		Company: XTO Energy, Inc													
Phone #: 575 937 3906		Fax #:		Project #:		Attn: Colton Brown													
Project Name: 03C1558508		Project Owner: XTO Energy		Address: 3104 E Greene St		City: Carlsbad													
Project Location: 832, 62184, -103, 85159		State: NM Zip: 88220		Phone #:		Fax #:													
Sampler Name: Owen Roe		FOR LAB USE ONLY		PRESERV.		SAMPLING													
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500									
HB50657	03404	3'		6	SOIL	2/25	1220	✓	✓	✓									
	13404	7'		6	WASTEWATER	2/25	1522	✓	✓	✓									
PLEASE NOTE: Liability and damages, Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal. Remedies of whether such claim is based upon any of the above stated remedies or otherwise.																			
Relinquished By: Owen Roe		Date: 5/20/25		Received By: Michelle Delacruz		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		All Results are emailed. Please provide Email address: BBeill@ensolum.com, TMorrissey@ensolum.com, TThillard@ensolum.com			REMARKS:						
Delivered By: (Circle One)		Observed Temp. °C: -0.3		Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact		CHECKED BY: (Initials)		Turnaround Time: #40 Rush		Bacteria (only) <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact		Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact		Observed Temp. °C					
Sampler - UPS - Bus - Other:		Corrected Temp. °C: 0.0		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		90		Thermometer ID: 473		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Corrected Temp. °C							

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



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

February 06, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: BIG EDDY HACKBERRY 34 BES

Enclosed are the results of analyses for samples received by the laboratory on 02/04/25 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
 TRACY HILLARD
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received: 02/04/2025
 Reported: 02/06/2025
 Project Name: BIG EDDY HACKBERRY 34 BES
 Project Number: 03C1558508
 Project Location: XTO 32.62184-103.85159

Sampling Date: 02/03/2025
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH 05 .5 (H250658-01)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/05/2025	ND	2.34	117	2.00	0.167	
Toluene*	<0.050	0.050	02/05/2025	ND	2.27	113	2.00	0.0601	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.41	120	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	7.25	121	6.00	4.17	
Total BTEX	<0.300	0.300	02/05/2025	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/05/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2025	ND	182	91.2	200	0.270	
DRO >C10-C28*	3790	10.0	02/05/2025	ND	188	94.2	200	0.312	
EXT DRO >C28-C36	1190	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane 78.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
 TRACY HILLARD
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received: 02/04/2025
 Reported: 02/06/2025
 Project Name: BIG EDDY HACKBERRY 34 BES
 Project Number: 03C1558508
 Project Location: XTO 32.62184-103.85159

Sampling Date: 02/03/2025
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH 05 4 (H250658-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/05/2025	ND	2.34	117	2.00	0.167		
Toluene*	<0.050	0.050	02/05/2025	ND	2.27	113	2.00	0.0601		
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.41	120	2.00	3.09		
Total Xylenes*	<0.150	0.150	02/05/2025	ND	7.25	121	6.00	4.17		
Total BTEx	<0.300	0.300	02/05/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/05/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/06/2025	ND	182	91.2	200	0.270	
DRO >C10-C28*	<10.0	10.0	02/06/2025	ND	188	94.2	200	0.312	
EXT DRO >C28-C36	<10.0	10.0	02/06/2025	ND					

Surrogate: 1-Chlorooctane 74.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.5 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Ensolum, LLC

Project Manager: *Greg Hilerd*

Address: 601 N Marientfeld Street, Suite 400

City: Midland State: TX Zip: 79701

Phone #: 575 937 3906 Fax #:

Project #: 036155 8508 Project Owner: XTO Energy

Project Name: *Big Ed's Hick hories 34 Bea*

Project Location: 32.62184, -103.85159

Sample Name: *Grey Pt*

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: XTO Energy, Inc

Attn: Colton Brown

Address: 3104 E Greene St

City: Carlsbad

State: NM Zip: 88220

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

TPH 8015

BTEX 8021

Chloride 4500

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Relinquished By:

Date: *8-4-25*

Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

All Results are emailed. Please provide Email address: BBell@ensolum.com, TMorrissey@ensolum.com, TThillard@ensolum.com

Relinquished By:

Date:

Received By:

REMARKS:

Turnaround Time: *#140 Rush* Standard ☐ Bacteria (only) Sample Condition ☐ Cool Intact ☐ Observed Temp. °C ☐ Corrected Temp. °C

Delivered By: (Circle One)

Observed Temp. °C *0.3*

Sample Condition Cool Intact ☐ Yes ☐ No

CHECKED BY: (Initials) *AB*

Thermometer ID #443-03C-103484

Correction Factor: *0.3C*

Bacteria (only) Sample Condition ☐ Cool Intact ☐ Observed Temp. °C ☐ Corrected Temp. °C

Sampler - UPS - Bus - Other:

Corrected Temp. °C *0.0*

Sample Condition Cool Intact ☐ Yes ☐ No

CHECKED BY: (Initials) *AB*

Thermometer ID #443-03C-103484

Correction Factor: *0.3C*

Bacteria (only) Sample Condition ☐ Cool Intact ☐ Observed Temp. °C ☐ Corrected Temp. °C

FORM-0000-R-3.2 10/07/21

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

February 06, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: BIG EDDY HACKBERRY 34 BES

Enclosed are the results of analyses for samples received by the laboratory on 02/04/25 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
 TRACY HILLARD
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received: 02/04/2025
 Reported: 02/06/2025
 Project Name: BIG EDDY HACKBERRY 34 BES
 Project Number: 03C1558508
 Project Location: XTO 32.62184-103.85159

Sampling Date: 02/03/2025
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH 05 5' (H250659-01)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/05/2025	ND	2.34	117	2.00	0.167	
Toluene*	<0.050	0.050	02/05/2025	ND	2.27	113	2.00	0.0601	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.41	120	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	7.25	121	6.00	4.17	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/05/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2025	ND	182	91.2	200	0.270	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	188	94.2	200	0.312	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane 83.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.6 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
 TRACY HILLARD
 705 W WADLEY AVE.
 MIDLAND TX, 79705
 Fax To:

Received: 02/04/2025
 Reported: 02/06/2025
 Project Name: BIG EDDY HACKBERRY 34 BES
 Project Number: 03C1558508
 Project Location: XTO 32.62184-103.85159

Sampling Date: 02/03/2025
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH 05 8' (H250659-02)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/05/2025	ND	2.34	117	2.00	0.167		
Toluene*	<0.050	0.050	02/05/2025	ND	2.27	113	2.00	0.0601		
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.41	120	2.00	3.09		
Total Xylenes*	<0.150	0.150	02/05/2025	ND	7.25	121	6.00	4.17		
Total BTEX	<0.300	0.300	02/05/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/05/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2025	ND	182	91.2	200	0.270	
DRO >C10-C28*	19.4	10.0	02/05/2025	ND	188	94.2	200	0.312	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane 79.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Ensolum, LLC

Project Manager: Bryg Hillard

Address: 601 N Marland Street, Suite 400

City: Midland State: TX Zip: 79701

Phone #: 575 9373906 Fax #:

Project #: 03C1558508 Project Owner: XTO Energy

Project Name: Bogoby Creek Hwy 34 Over

Project Location: 32.62184, -103.85159

Sample Name: Even Par

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: XTO Energy, Inc

Attn: Colton Brown

Address: 3104 E Greene St

City: Carlsbad

State: NM Zip: 88220

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

TPH 8015

BTEX 8021

Chloride 4500

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Relinquished By:

Date: 3-4-25 Received By:

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

Remarks:

Relinquished By: Even Par

Date: 3-4-25 Received By: Bryg Hillard

Remarks: BBell@ensolum.com, TMorrissey@ensolum.com, THillard@ensolum.com

Delivered By: (Circle One)

Observed Temp.: °C -0.3

Sample Condition Cool Intact ☒ Yes ☐ No

CHECKED BY: (Initials) BB

Turnaround Time: Standard

Thermometer ID: 440

Bacteria (only) ☐ Yes ☒ No

Sample Condition Observed Temp. °C 0.0

Sampler - UPS - Bus - Other:

Corrected Temp.: °C 0.0

Cool Intact ☐ Yes ☒ No

Thermometer ID: 440

Bacteria (only) ☐ Yes ☒ No

Sample Condition Observed Temp. °C 0.0

FORM 0000 R 3.2 10/07/21

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

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

QUESTIONS

Action 453402

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 453402
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2408932392
Incident Name	NAPP2408932392 BIG EDDY HACKBERRY 34 BATTERY @ 0
Incident Type	Oil Release
Incident Status	Deferral Request Received

Location of Release Source*Please answer all the questions in this group.*

Site Name	Big Eddy Hackberry 34 Battery
Date Release Discovered	03/15/2024
Surface Owner	Federal

Incident Details*Please answer all the questions in this group.*

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

Nature and Volume of Release*Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.*

Crude Oil Released (bbls) Details	Cause: Normal Operations Valve Crude Oil Released: 6 BBL Recovered: 3 BBL Lost: 3 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 453402

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 453402
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 03/29/2024
--	--

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QUESTIONS, Page 3

Action 453402

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number: 453402
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Site Characterization	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	OCD Imaging Records Lookup
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	1170
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	5519
GRO+DRO (EPA SW-846 Method 8015M)	4499
BTEX (EPA SW-846 Method 8021B or 8260B)	2.6
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
On what estimated date will the remediation commence	05/20/2024
On what date will (or did) the final sampling or liner inspection occur	07/23/2024
On what date will (or was) the remediation complete(d)	07/23/2024
What is the estimated surface area (in square feet) that will be reclaimed	6950
What is the estimated volume (in cubic yards) that will be reclaimed	898
What is the estimated surface area (in square feet) that will be remediated	3000
What is the estimated volume (in cubic yards) that will be remediated	460
<i>These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.</i>	
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 4

Action 453402

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 453402
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	HALFWAY DISPOSAL AND LANDFILL [FEEM0112334510]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 05/20/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 453402

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 453402
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Deferral Requests Only	
<i>Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	separators, surface and subsurface lines, electrical panels
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	1210
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	134
<i>Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.</i>	
Enter the facility ID (f#) on which this deferral should be granted	BIG EDDY HACKBERRY 34 BATT [fAPP2126341665]
Enter the well API (30-) on which this deferral should be granted	Not answered.
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Robert Woodall Title: Environmental Analyst Email: robert.d.woodall@exxonmobil.com Date: 05/20/2025

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QUESTIONS, Page 6

Action 453402

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 453402
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	426378
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	02/04/2025
What was the (estimated) number of samples that were to be gathered	10
What was the sampling surface area in square feet	2000

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	No
--	----

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CONDITIONS

Action 453402

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 453402
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests final remediation for (Incident Number NAPP2408932392) until final reclamation of the well pad or major construction, whichever comes first. Ensolum and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The impacted soil is the shaded area on figure 2 that is limited to the area between active production equipment, where remediation would require a major facility deconstruction. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and placed in the incident file. The release will remain open in OCD database files and reflect an open environmental issue.	5/21/2025