



CLOSURE REQUEST REPORT

**Benson Shugart Waterflood Unit #011
Eddy County, New Mexico
Incident Number nMCS0124834063**

**Prepared For:
Chevron USA, Inc.
6301 Deauville Blvd.
Midland, TX 79706**

Carlsbad • Midland • San Antonio • Lubbock • Hobbs • Lafayette

SYNOPSIS

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Chevron USA, Inc (Chevron), presents the following Closure Request Report (CRR) detailing corrective actions and subsequent soil sampling events as proposed in an approved Remediation Work Plan (RWP), for an inadvertent release of crude oil and produced water at the Benson Shugart Waterflood Unit #011 (Site). Based on completed remedial actions and laboratory analytical results from recent soil sampling events, Chevron is requesting No Further Action (NFA) at the Site.

SITE LOCATION AND BACKGROUND

The Site is located in Unit I, Section 26, Township 18 South, Range 30 East, in Eddy County, New Mexico (32.71758° N, 103.93540° W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM) (**Figure 1 in Appendix A**).

On June 4, 2001, equipment failure from a tee fitting caused the release of approximately 80 barrels (bbls) of crude oil, and 200 bbls of produced water onto the well pad surface. A vacuum truck was dispatched to the Site and recovered approximately 60 bbls of crude oil and 120 bbls of produced water. Chevron reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Corrective Action Form C-141 (Form C-141), which was received by the NMOCD on August 17, 2022, and was subsequently assigned Incident Number nMCS0124834063.

Between January 5, 2022, and April 11, 2022, Etech conducted site assessment and delineation activities to assess the presence and/or absence of impacts at the Site. A RWP was prepared by Etech to address residual impacts based on laboratory analytical results from delineation activities that exceeded the Site Closure Criteria. The RWP was approved by the NMOCD on December 8, 2022.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

As previously described in the approved RWP, the Site was characterized according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC) considering depth to groundwater and the proximity to:

- Any continuously flowing watercourse or any other significant watercourse;
- Any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark);
- An occupied permanent residence, school, hospital, institution or church;
- A spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes;
- Any freshwater well or spring;
- Incorporated municipal boundaries or a defined municipal fresh water well field covered under a municipal ordinance;
- A wetland;
- A subsurface mine;
- An unstable area (i.e. high karst potential); and
- A 100-year floodplain.

The closest well with data is United States Geological Survey (USGS) well 324244103561601, located approximately 0.2 miles southwest of the Site. The well has a reported depth to groundwater of 183.99 feet below ground surface (bgs) from 1994. The location of the USGS well and other regional groundwater well locations are shown in **Figure 1A in Appendix A**. The well record referenced for depth to groundwater determination is included in **Appendix B**.

Based on the desktop review of the current BLM Carlsbad Field Office (CFO) karst cave potential map, this Site is located in a medium potential karst area. All other potential receptors are not within the established buffers in NMAC 19.15.29.12. Receptor details from the site characterization are included in **Figure 1B**, and **Figure 1C** in **Appendix A**.

Based on the results from the desktop review and age of last groundwater depth measurement - (less than 25 years old) for a well within 0.5 mile of the Site, the following Closure Criteria was applied:

Constituents of Concern (COCs)	Laboratory Analytical Method	Closure Criteria [†]
Chloride	(Environmental Protection Agency) EPA 300.0	600 milligrams per kilogram (mg/kg)
Total Petroleum Hydrocarbon (TPH)	EPA 8015 M/D	100 mg/kg
Benzene	EPA 8021B	10 mg/kg
Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA 8021B	50 mg/kg

[†]The reclamation concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.

EXCAVATION SOIL SAMPLING ACTIVITIES

On November 11, 2023, Etech personnel began excavating identified impacts based on results of laboratory analytical results for delineation soil samples and visual observations via mechanical equipment. Excavation activities were driven by field screening soil samples for volatile organic hydrocarbons using a photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips.

Following the removal of residual soil impacts, Etech collected 5-point composite confirmation excavation soil samples at a sampling frequency of 200 square feet from the excavation floor and sidewalls. The 5-point composite samples were comprised of five equivalent aliquots homogenized in a 1-gallon, resealable plastic bag. The samples were then placed into lab provided pre-cleaned glass jars, packaged with minimal void space, labeled, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Permian Basin Environmental Laboratory (PBELAB) in Midland, Texas, for analysis of COCs. The location of confirmation excavation soil samples is shown in **Figure 2** in **Appendix A**.

Impacted soil was removed from the Site and transported to a licensed and approved New Mexico landfill. Upon receipt of the final confirmation excavation soil samples results, the excavation was backfilled with clean, locally sourced soil and the pad surface was recontoured to match the original grade. Photographic documentation of excavation activities is included in **Appendix C**.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all final confirmation excavation soil samples indicated all analyzed COCs were below the Site Closure Criteria. Laboratory analytical results are summarized in **Table 1** included in **Appendix D**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix E**.

SITE CLOSURE REQUEST

Based on laboratory analytical results for confirmation excavation soil samples, Chevron believes residual soil impacts associated with the inadvertent release have been excavated and removed from the Site. COCs concentrations for all final excavation confirmation soil samples were below the Site Closure Criteria.

Closure Request Report
Incident Number nMCS0124834063
Benson Shugart Waterflood Unit #011

As such, NFA appears warranted at this time and Incident Number nMCS0124834063 should be respectfully considered for Closure by the NMOCD. Chevron believes the completed remedial actions meet the requirements set forth in the NMAC regulations and to be protective of human health, the environment, and groundwater.

If you have any questions or comments, please do not hesitate to contact Blake Estep at (432) 894-6038 or blake@etechenv.com. Appendix F provides correspondence email notification receipts associated with the subject release. Previous remediation activities and soil sample analytical results for the subject release can be referenced in the approved RWP in **Appendix G**.

Sincerely,
Etech Environmental and Safety Solutions, Inc.



Blake Estep
Project Manager

cc: Amy Barnhill, Chevron
New Mexico Oil Conservation Division
Bureau of Land Management

Appendices:

- Appendix A:** Figure 1: Site Map
 - Figure 1A: Site Characterization Map – Groundwater
 - Figure 1B: Site Characterization Map – Surficial Receptors
 - Figure 1C: Site Characterization Map – Karst Potential
 - Figure 2: Excavation Soil Sample Locations
- Appendix B:** Referenced Well Record
- Appendix C:** Photographic Log
- Appendix D:** Tables
- Appendix E:** Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix F:** NMOCD Notifications
- Appendix G:** Approved Remediation Work Plan

Closure Request Report
Incident Number nMCS0124834063
Benson Shugart Waterflood Unit #011

pg. 4

APPENDIX A

Figures

P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213



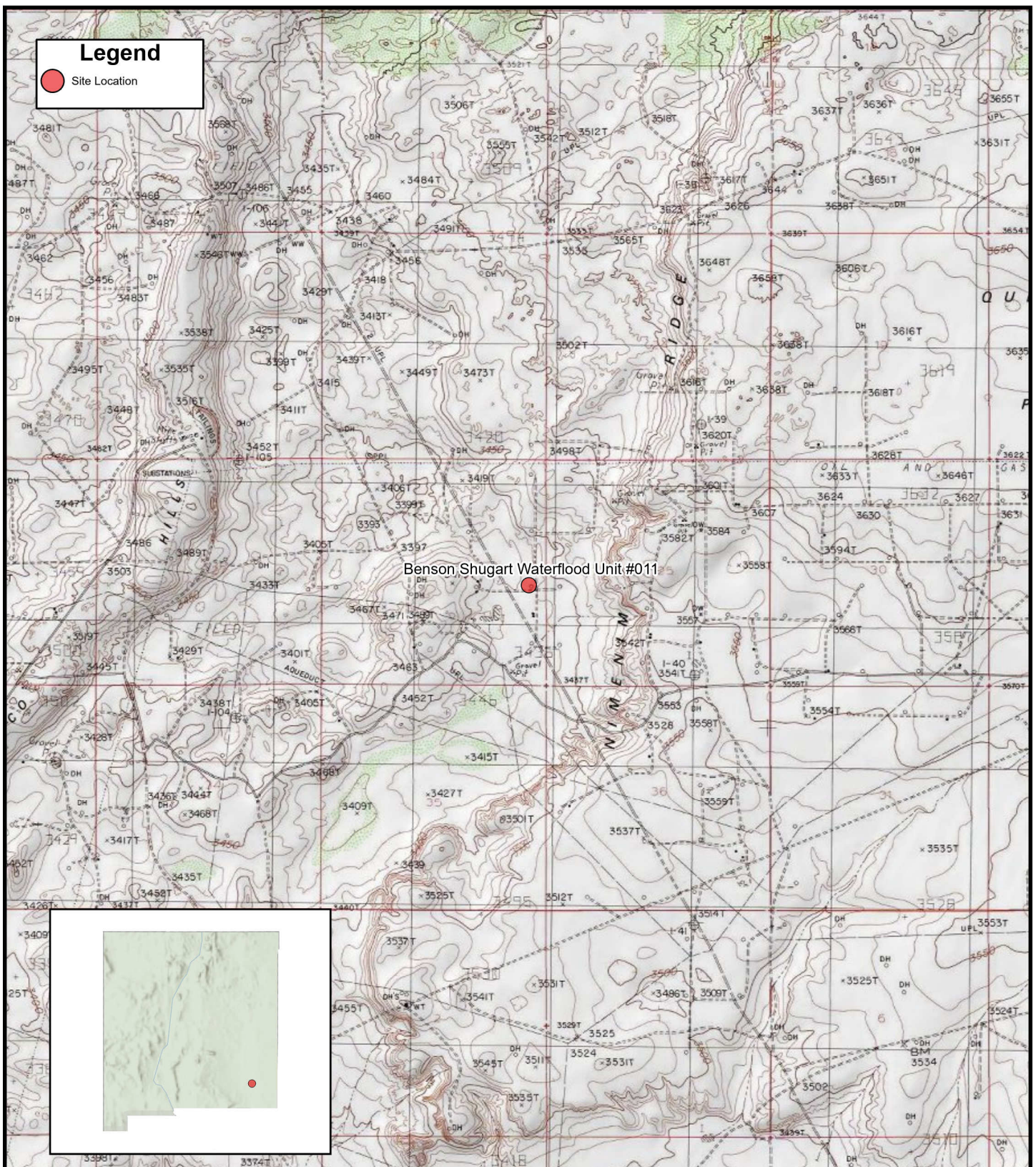


FIGURE 1

Site Location Map

Chevron USA, Inc.
 Benson Shugart Waterflood Unit #011
 Unit 1 Sec 26 T18S R30E
 Eddy County, New Mexico



0 2,000 4,000 Feet

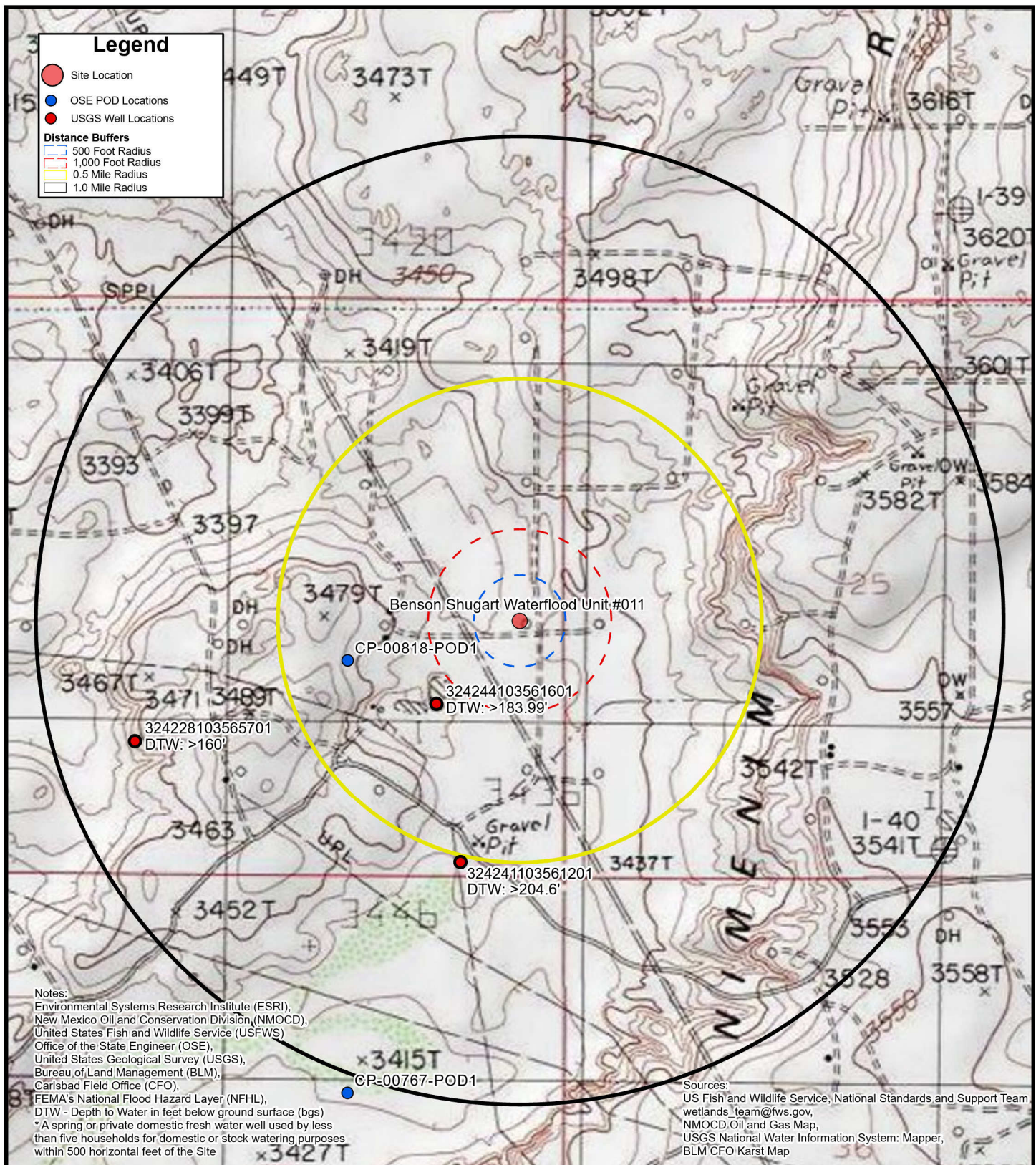
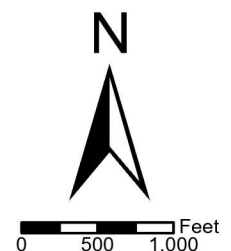
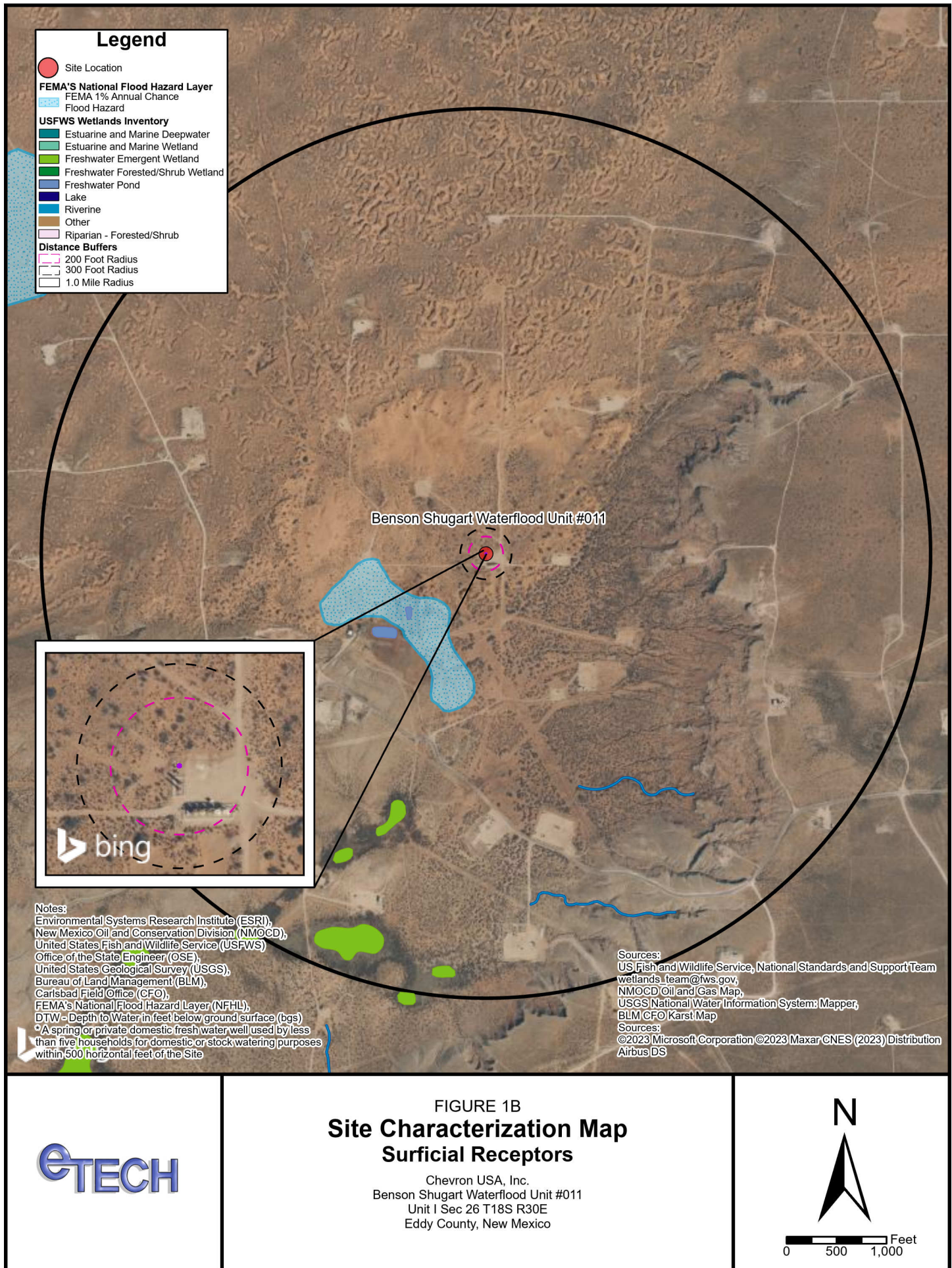


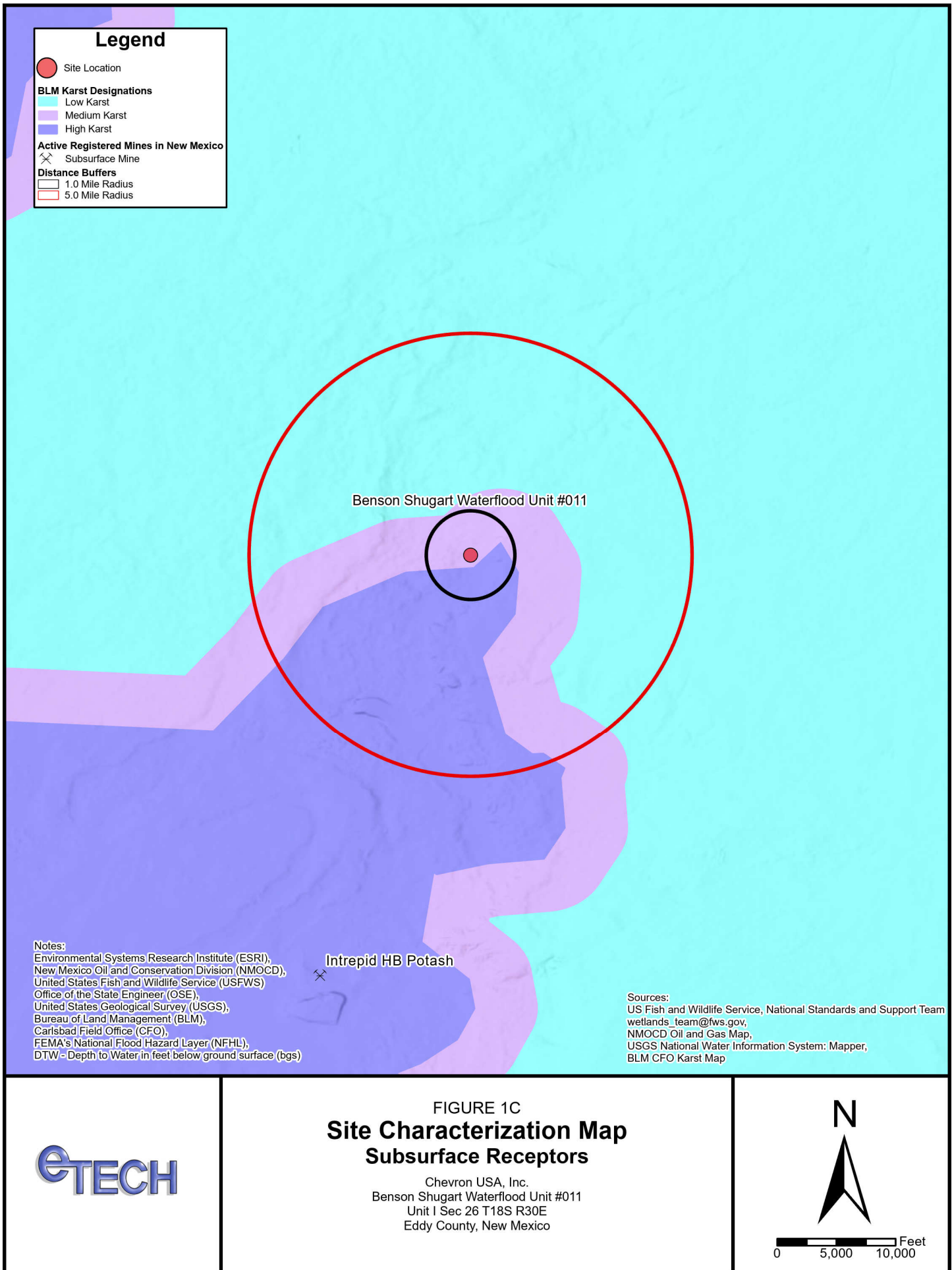
FIGURE 1A
**Site Characterization Map
 Groundwater**

Chevron USA, Inc.
 Benson Shugart Waterflood Unit #011
 Unit 1 Sec 26 T18S R30E
 Eddy County, New Mexico

eTECH







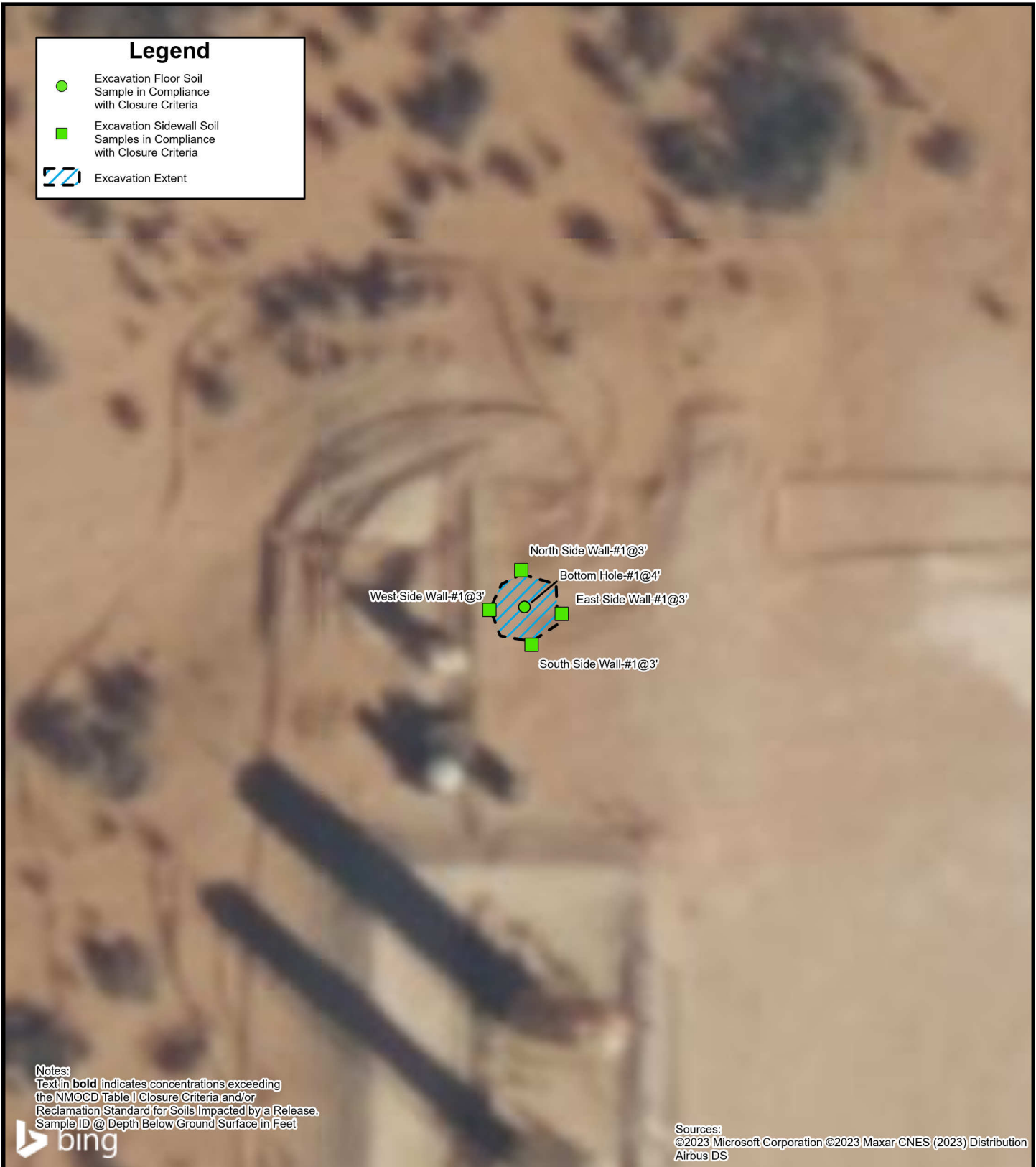
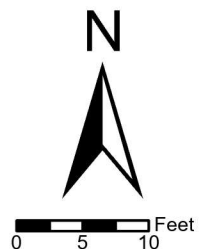


FIGURE 2

Excavation Soil Sample Locations

Chevron USA, Inc.
Benson Shugart Waterflood Unit #011
Unit 1 Sec 26 T18S R30E
Eddy County, New Mexico



APPENDIX B

Referenced Well Record



USGS Home

Contact USGS

Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:


Groundwater

Geographic Area:

United States

GO

Click to hideNews Bulletins

- Explore the NEW [USGS National Water Dashboard](#) interactive map to access real-time water data from over 13,500 stations nationwide.
- [Full News](#) 

Groundwater levels for the Nation

 Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 324244103561601

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 324244103561601 18S.30E.26.414144

Eddy County, New Mexico
Latitude 32°42'55.8", Longitude 103°56'16.4" NAD83
Land-surface elevation 3,431 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measured
1976-05-28			D	62610	3235.07	NGVD29	1		Z	
1976-05-28			D	62611	3236.61	NAVD88	1		Z	
1976-05-28			D	72019	194.39		1		Z	
1983-04-12			D	62610	3243.42	NGVD29	1		Z	
1983-04-12			D	62611	3244.96	NAVD88	1		Z	
1983-04-12			D	72019	186.04		1		Z	
1990-10-10			D	62610	3246.44	NGVD29	1		S	
1990-10-10			D	62611	3247.98	NAVD88	1		S	
1990-10-10			D	72019	183.02		1		S	
1994-03-16			D	62610	3245.47	NGVD29	1		S	
1994-03-16			D	62611	3247.01	NAVD88	1		S	
1994-03-16			D	72019	183.99		1		S	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day

Section	Code	Description
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

[Questions or Comments](#)
[Automated retrievals](#)
[Help](#)
[Data Tips](#)
[Explanation of terms](#)
[Subscribe for system changes](#)
[News](#)

[Accessibility](#) [FOIA](#) [Privacy](#) [Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels
URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)
Page Last Modified: 2024-01-16 17:27:09 EST
0.28 0.25 nadww02

APPENDIX C

Photographic Log

P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213



**PHOTOGRAPHIC LOG**

Chevron USA, Inc.

Benson Shugart Waterflood Unit #011

Incident Number nMCS0124834063

**Photograph 1****Date: 11/21/2023**

Description: Southeastern view of excavation activities.

**Photograph 2****Date: 11/21/2023**

Description: Northern view of excavation activities.

**Photograph 3****Date: 02/02/2024**

Description: Northwestern view of restoration activities.

**Photograph 4****Date: 02/02/2024**

Description: Southwest view of restoration activities.

APPENDIX D

Tables



Table 1
SOIL SAMPLE ANALYTICAL RESULTS
Chevron USA, Inc.
Benson Shugart Waterflood Unit #011
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)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)			10	50	NE	NE	NE	100	600
Excavation Soil Samples - nMCS0124834063									
Bottom Hole-#1	11/21/2023	4	<0.00104	<0.00208	<26.0	43.5	<26.0	43.5	16.9
North Side Wall-#1	11/21/2023	3	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	294
South Side Wall-#1	11/21/2023	3	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	21.5
East Side Wall-#1	11/21/2023	3	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	13.5
West Side Wall-#1	11/21/2023	3	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	10.8

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Text in "grey" represents excavated soil samples

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria and/or Reclamation Standard[†] for Soils Impacted by a Release[†] The reclamation concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.

APPENDIX E

Laboratory Analytical Reports & Chain-of-Custody Documentation

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Blake Estep
E Tech Environmental & Safety Solutions, Inc. [1]
13000 West County Road 100
Odessa, TX 79765

Project: Benson Shugart Waterflood Unit #011

Project Number: 15304

Location: None Given

Lab Order Number: 3K28012



Current Certification

Report Date: 12/04/23

E Tech Environmental & Safety Solutions, Inc. [1] 13000 West County Road 100 Odessa TX, 79765	Project: Benson Shugart Waterflood Unit #011 Project Number: 15304 Project Manager: Blake Estep
---	---

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Bottom Hole-#1 @ 4'	3K28012-01	Soil	11/21/23 11:00	11-28-2023 15:30
North Side Wall-#1 @ 3'	3K28012-02	Soil	11/21/23 10:15	11-28-2023 15:30
South Side Wall-#1 @ 3'	3K28012-03	Soil	11/21/23 10:10	11-28-2023 15:30
East Side Wall-#1 @ 3'	3K28012-04	Soil	11/21/23 11:15	11-28-2023 15:30
West Side Wall-#1 @ 3'	3K28012-05	Soil	11/21/23 10:30	11-28-2023 15:30

E Tech Environmental & Safety Solutions, Inc. [1]	Project: Benson Shugart Waterflood Unit #011
13000 West County Road 100	Project Number: 15304
Odessa TX, 79765	Project Manager: Blake Estep

Bottom Hole-#1 @ 4'
3K28012-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00104	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:06	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:06	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:06	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:06	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:06	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	112 %		80-120		P3K2802	11/28/23 11:51	11/28/23 17:06	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	95.4 %		80-120		P3K2802	11/28/23 11:51	11/28/23 17:06	EPA 8021B	
Xylenes (total)	ND	0.00208	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 17:06	EPA 8021B	
Total BTEX	ND	0.00104	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 17:06	EPA 8021B	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.0	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 03:55	TPH 8015M	
>C12-C28	43.5	26.0	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 03:55	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 03:55	TPH 8015M	
Surrogate: 1-Chlorooctane	96.4 %		70-130		P3K2902	11/29/23 16:04	11/30/23 03:55	TPH 8015M	
Surrogate: o-Terphenyl	102 %		70-130		P3K2902	11/29/23 16:04	11/30/23 03:55	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	43.5	26.0	mg/kg dry	1	[CALC]	11/29/23 16:04	11/30/23 03:55	calc	

General Chemistry Parameters by EPA / Standard Methods

Chloride	16.9	1.04	mg/kg dry	1	P3K2907	11/29/23 16:40	12/02/23 11:22	EPA 300.0	
% Moisture	4.0	0.1	%	1	P3K2901	11/29/23 09:37	11/29/23 09:49	ASTM D2216	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]
13000 West County Road 100
Odessa TX, 79765

Project: Benson Shugart Waterflood Unit #011
Project Number: 15304
Project Manager: Blake Estep

North Side Wall-#1 @ 3'
3K28012-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:31	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:31	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:31	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:31	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:31	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	114 %	80-120			P3K2802	11/28/23 11:51	11/28/23 17:31	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	96.2 %	80-120			P3K2802	11/28/23 11:51	11/28/23 17:31	EPA 8021B	
Xylenes (total)	ND	0.00206	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 17:31	EPA 8021B	
Total BTEX	ND	0.00103	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 17:31	EPA 8021B	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.8	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 05:08	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 05:08	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 05:08	TPH 8015M	
Surrogate: 1-Chlorooctane	93.2 %	70-130			P3K2902	11/29/23 16:04	11/30/23 05:08	TPH 8015M	
Surrogate: o-Terphenyl	98.9 %	70-130			P3K2902	11/29/23 16:04	11/30/23 05:08	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	11/29/23 16:04	11/30/23 05:08	calc	

General Chemistry Parameters by EPA / Standard Methods

Chloride	294	1.03	mg/kg dry	1	P3K2907	11/29/23 16:40	12/02/23 12:05	EPA 300.0	
% Moisture	3.0	0.1	%	1	P3K2901	11/29/23 09:37	11/29/23 09:49	ASTM D2216	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]
13000 West County Road 100
Odessa TX, 79765

Project: Benson Shugart Waterflood Unit #011
Project Number: 15304
Project Manager: Blake Estep

South Side Wall-#1 @ 3'
3K28012-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00105	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:55	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:55	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:55	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:55	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 17:55	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	96.0 %		80-120		P3K2802	11/28/23 11:51	11/28/23 17:55	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	114 %		80-120		P3K2802	11/28/23 11:51	11/28/23 17:55	EPA 8021B	
Xylenes (total)	ND	0.00211	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 17:55	EPA 8021B	
Total BTEX	ND	0.00105	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 17:55	EPA 8021B	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.3	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 05:32	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 05:32	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 05:32	TPH 8015M	
Surrogate: 1-Chlorooctane	94.9 %		70-130		P3K2902	11/29/23 16:04	11/30/23 05:32	TPH 8015M	
Surrogate: o-Terphenyl	99.4 %		70-130		P3K2902	11/29/23 16:04	11/30/23 05:32	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	11/29/23 16:04	11/30/23 05:32	calc	

General Chemistry Parameters by EPA / Standard Methods

Chloride	21.5	1.05	mg/kg dry	1	P3K2907	11/29/23 16:40	12/02/23 12:19	EPA 300.0	
% Moisture	5.0	0.1	%	1	P3K2901	11/29/23 09:37	11/29/23 09:49	ASTM D2216	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]
13000 West County Road 100
Odessa TX, 79765

Project: Benson Shugart Waterflood Unit #011
Project Number: 15304
Project Manager: Blake Estep

East Side Wall-#1 @ 3'
3K28012-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:19	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:19	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:19	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:19	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	95.3 %		80-120		P3K2802	11/28/23 11:51	11/28/23 18:19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	114 %		80-120		P3K2802	11/28/23 11:51	11/28/23 18:19	EPA 8021B	
Xylenes (total)	ND	0.00206	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 18:19	EPA 8021B	
Total BTEX	ND	0.00103	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 18:19	EPA 8021B	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.8	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 05:56	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 05:56	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 05:56	TPH 8015M	
Surrogate: 1-Chlorooctane	94.2 %		70-130		P3K2902	11/29/23 16:04	11/30/23 05:56	TPH 8015M	
Surrogate: o-Terphenyl	99.6 %		70-130		P3K2902	11/29/23 16:04	11/30/23 05:56	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	11/29/23 16:04	11/30/23 05:56	calc	

General Chemistry Parameters by EPA / Standard Methods

Chloride	13.5	1.03	mg/kg dry	1	P3K2907	11/29/23 16:40	12/02/23 12:33	EPA 300.0	
% Moisture	3.0	0.1	%	1	P3K2901	11/29/23 09:37	11/29/23 09:49	ASTM D2216	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]
13000 West County Road 100
Odessa TX, 79765

Project: Benson Shugart Waterflood Unit #011
Project Number: 15304
Project Manager: Blake Estep

West Side Wall-#1 @ 3'
3K28012-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Permian Basin Environmental Lab, L.P.

BTEX by 8021B

Benzene	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:44	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:44	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:44	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:44	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P3K2802	11/28/23 11:51	11/28/23 18:44	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	115 %	80-120			P3K2802	11/28/23 11:51	11/28/23 18:44	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	95.7 %	80-120			P3K2802	11/28/23 11:51	11/28/23 18:44	EPA 8021B	
Xylenes (total)	ND	0.00206	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 18:44	EPA 8021B	
Total BTEX	ND	0.00103	mg/kg dry	1	[CALC]	11/28/23 11:51	11/28/23 18:44	EPA 8021B	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.8	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 06:20	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 06:20	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P3K2902	11/29/23 16:04	11/30/23 06:20	TPH 8015M	
Surrogate: 1-Chlorooctane	94.5 %	70-130			P3K2902	11/29/23 16:04	11/30/23 06:20	TPH 8015M	
Surrogate: o-Terphenyl	99.1 %	70-130			P3K2902	11/29/23 16:04	11/30/23 06:20	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	11/29/23 16:04	11/30/23 06:20	calc	

General Chemistry Parameters by EPA / Standard Methods

Chloride	10.8	1.03	mg/kg dry	1	P3K2907	11/29/23 16:40	12/02/23 12:48	EPA 300.0	
% Moisture	3.0	0.1	%	1	P3K2901	11/29/23 09:37	11/29/23 09:49	ASTM D2216	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]
13000 West County Road 100
Odessa TX, 79765

Project: Benson Shugart Waterflood Unit #011
Project Number: 15304
Project Manager: Blake Estep

BTEX by 8021B - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch P3K2802 - * DEFAULT PREP *****

Blank (P3K2802-BLK1)

Prepared & Analyzed: 11/28/23

Benzene	ND	0.00100	mg/kg							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	0.113		"	0.120		94.6	80-120			
Surrogate: 4-Bromofluorobenzene	0.135		"	0.120		112	80-120			

LCS (P3K2802-BS1)

Prepared & Analyzed: 11/28/23

Benzene	0.108	0.00100	mg/kg	0.100		108	80-120			
Toluene	0.0983	0.00100	"	0.100		98.3	80-120			
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120			
Xylene (p/m)	0.215	0.00200	"	0.200		108	80-120			
Xylene (o)	0.0940	0.00100	"	0.100		94.0	80-120			
Surrogate: 1,4-Difluorobenzene	0.115		"	0.120		96.0	80-120			
Surrogate: 4-Bromofluorobenzene	0.128		"	0.120		107	80-120			

LCS Dup (P3K2802-BSD1)

Prepared & Analyzed: 11/28/23

Benzene	0.118	0.00100	mg/kg	0.100		118	80-120	8.39	20	
Toluene	0.108	0.00100	"	0.100		108	80-120	9.89	20	
Ethylbenzene	0.118	0.00100	"	0.100		118	80-120	9.46	20	
Xylene (p/m)	0.234	0.00200	"	0.200		117	80-120	8.37	20	
Xylene (o)	0.104	0.00100	"	0.100		104	80-120	10.3	20	
Surrogate: 1,4-Difluorobenzene	0.114		"	0.120		94.9	80-120			
Surrogate: 4-Bromofluorobenzene	0.127		"	0.120		105	80-120			

Calibration Blank (P3K2802-CCB1)

Prepared & Analyzed: 11/28/23

Benzene	0.190		ug/kg							
Toluene	0.210		"							
Ethylbenzene	0.190		"							
Xylene (p/m)	0.310		"							
Xylene (o)	0.180		"							
Surrogate: 1,4-Difluorobenzene	0.114		"	0.120		94.6	80-120			
Surrogate: 4-Bromofluorobenzene	0.136		"	0.120		114	80-120			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]	Project: Benson Shugart Waterflood Unit #011
13000 West County Road 100	Project Number: 15304
Odessa TX, 79765	Project Manager: Blake Estep

BTEX by 8021B - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch P3K2802 - *** DEFAULT PREP ***

Calibration Blank (P3K2802-CCB2)				Prepared & Analyzed: 11/28/23						
Benzene	0.130		ug/kg							
Toluene	0.250		"							
Ethylbenzene	0.340		"							
Xylene (p/m)	0.290		"							
Xylene (o)	0.190		"							
Surrogate: 1,4-Difluorobenzene	0.115		"	0.120		96.0	80-120			
Surrogate: 4-Bromofluorobenzene	0.135		"	0.120		112	80-120			

Calibration Blank (P3K2802-CCB3)				Prepared: 11/28/23 Analyzed: 11/29/23						
Benzene	0.140		ug/kg							
Toluene	0.520		"							
Ethylbenzene	0.200		"							
Xylene (p/m)	0.550		"							
Xylene (o)	0.910		"							
Surrogate: 1,4-Difluorobenzene	0.115		"	0.120		96.1	80-120			
Surrogate: 4-Bromofluorobenzene	0.138		"	0.120		115	80-120			

Calibration Check (P3K2802-CCV1)				Prepared & Analyzed: 11/28/23						
Benzene	0.107	0.00100	mg/kg	0.100		107	80-120			
Toluene	0.0997	0.00100	"	0.100		99.7	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.220	0.00200	"	0.200		110	80-120			
Xylene (o)	0.0997	0.00100	"	0.100		99.7	80-120			
Surrogate: 4-Bromofluorobenzene	0.128		"	0.120		107	75-125			
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		96.5	75-125			

Calibration Check (P3K2802-CCV2)				Prepared & Analyzed: 11/28/23						
Benzene	0.113	0.00100	mg/kg	0.100		113	80-120			
Toluene	0.109	0.00100	"	0.100		109	80-120			
Ethylbenzene	0.113	0.00100	"	0.100		113	80-120			
Xylene (p/m)	0.229	0.00200	"	0.200		114	80-120			
Xylene (o)	0.110	0.00100	"	0.100		110	80-120			
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		97.0	75-125			
Surrogate: 4-Bromofluorobenzene	0.135		"	0.120		113	75-125			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]	Project: Benson Shugart Waterflood Unit #011
13000 West County Road 100	Project Number: 15304
Odessa TX, 79765	Project Manager: Blake Estep

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch P3K2802 - *** DEFAULT PREP ***

Calibration Check (P3K2802-CCV3)	Prepared: 11/28/23 Analyzed: 11/29/23									
Benzene	0.114	0.00100	mg/kg	0.100		114	80-120			
Toluene	0.110	0.00100	"	0.100		110	80-120			
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120			
Xylene (p/m)	0.214	0.00200	"	0.200		107	80-120			
Xylene (o)	0.104	0.00100	"	0.100		104	80-120			
Surrogate: 4-Bromofluorobenzene	0.127		"	0.120		105	75-125			
Surrogate: 1,4-Difluorobenzene	0.116		"	0.120		96.4	75-125			

Matrix Spike (P3K2802-MS1)	Source: 3K27012-01			Prepared & Analyzed: 11/28/23						
Benzene	0.108	0.00125	mg/kg dry	0.125	0.304	NR	80-120			
Toluene	1.09	0.00125	"	0.125	6.80	NR	80-120			
Ethylbenzene	1.59	0.00125	"	0.125	19.7	NR	80-120			
Xylene (p/m)	2.63	0.00250	"	0.250	46.1	NR	80-120			
Xylene (o)	1.18	0.00125	"	0.125	20.7	NR	80-120			
Surrogate: 4-Bromofluorobenzene	0.442		"	0.150		294	80-120			
Surrogate: 1,4-Difluorobenzene	0.121		"	0.150		80.4	80-120			

Matrix Spike Dup (P3K2802-MSD1)	Source: 3K27012-01			Prepared: 11/28/23 Analyzed: 11/29/23						
Benzene	0.106	0.00125	mg/kg dry	0.125	0.304	NR	80-120	NR	20	
Toluene	1.09	0.00125	"	0.125	6.80	NR	80-120	NR	20	
Ethylbenzene	1.58	0.00125	"	0.125	19.7	NR	80-120	NR	20	
Xylene (p/m)	2.56	0.00250	"	0.250	46.1	NR	80-120	NR	20	
Xylene (o)	1.14	0.00125	"	0.125	20.7	NR	80-120	NR	20	
Surrogate: 1,4-Difluorobenzene	0.117		"	0.150		77.7	80-120			
Surrogate: 4-Bromofluorobenzene	0.431		"	0.150		287	80-120			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]
13000 West County Road 100
Odessa TX, 79765

Project: Benson Shugart Waterflood Unit #011
Project Number: 15304
Project Manager: Blake Estep

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch P3K2902 - TX 1005

Blank (P3K2902-BLK1)

Prepared & Analyzed: 11/29/23

C6-C12	ND	25.0	mg/kg							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	95.1		"	100		95.1	70-130			
Surrogate: o-Terphenyl	50.9		"	50.0		102	70-130			

LCS (P3K2902-BS1)

Prepared & Analyzed: 11/29/23

C6-C12	796	25.0	mg/kg	1000		79.6	75-125			
>C12-C28	761	25.0	"	1000		76.1	75-125			
Surrogate: 1-Chlorooctane	108		"	100		108	70-130			
Surrogate: o-Terphenyl	47.4		"	50.0		94.7	70-130			

LCS Dup (P3K2902-BSD1)

Prepared & Analyzed: 11/29/23

C6-C12	879	25.0	mg/kg	1000		87.9	75-125	9.90	20	
>C12-C28	855	25.0	"	1000		85.5	75-125	11.7	20	
Surrogate: 1-Chlorooctane	123		"	100		123	70-130			
Surrogate: o-Terphenyl	53.5		"	50.0		107	70-130			

Calibration Check (P3K2902-CCV1)

Prepared & Analyzed: 11/29/23

C6-C12	430	25.0	mg/kg	500		86.1	85-115			
>C12-C28	443	25.0	"	500		88.5	85-115			
Surrogate: 1-Chlorooctane	98.0		"	100		98.0	70-130			
Surrogate: o-Terphenyl	47.6		"	50.0		95.3	70-130			

Calibration Check (P3K2902-CCV2)

Prepared: 11/29/23 Analyzed: 11/30/23

C6-C12	456	25.0	mg/kg	500		91.2	85-115			
>C12-C28	441	25.0	"	500		88.2	85-115			
Surrogate: 1-Chlorooctane	103		"	100		103	70-130			
Surrogate: o-Terphenyl	48.8		"	50.0		97.6	70-130			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]	Project: Benson Shugart Waterflood Unit #011
13000 West County Road 100	Project Number: 15304
Odessa TX, 79765	Project Manager: Blake Estep

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch P3K2902 - TX 1005

Calibration Check (P3K2902-CCV3)	Prepared: 11/29/23 Analyzed: 11/30/23									
C6-C12	463	25.0	mg/kg	500		92.6	85-115			
>C12-C28	462	25.0	"	500		92.4	85-115			
Surrogate: 1-Chlorooctane	97.5		"	100		97.5	70-130			
Surrogate: o-Terphenyl	48.2		"	50.0		96.5	70-130			

Duplicate (P3K2902-DUP1)	Source: 3K29007-26		Prepared: 11/29/23 Analyzed: 11/30/23							
C6-C12	ND	26.6	mg/kg dry		10.1				20	
>C12-C28	12.3	26.6	"		12.0			1.92	20	
Surrogate: 1-Chlorooctane	93.5		"	106		87.9	70-130			
Surrogate: o-Terphenyl	49.3		"	53.2		92.7	70-130			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

E Tech Environmental & Safety Solutions, Inc. [1]	Project: Benson Shugart Waterflood Unit #011
13000 West County Road 100	Project Number: 15304
Odessa TX, 79765	Project Manager: Blake Estep

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P3K2901 - *** DEFAULT PREP ***										
Blank (P3K2901-BLK1)				Prepared & Analyzed: 11/29/23						
% Moisture	ND	0.1	%							
Blank (P3K2901-BLK2)				Prepared & Analyzed: 11/29/23						
% Moisture	ND	0.1	%							
Duplicate (P3K2901-DUP1)				Source: 3K28002-06	Prepared & Analyzed: 11/29/23					
% Moisture	1.0	0.1	%		1.0			0.00	20	
Duplicate (P3K2901-DUP2)				Source: 3K28003-02	Prepared & Analyzed: 11/29/23					
% Moisture	2.0	0.1	%		2.0			0.00	20	
Duplicate (P3K2901-DUP3)				Source: 3K28013-01	Prepared & Analyzed: 11/29/23					
% Moisture	6.0	0.1	%		6.0			0.00	20	
Batch P3K2907 - *** DEFAULT PREP ***										
Blank (P3K2907-BLK1)				Prepared: 11/29/23 Analyzed: 12/03/23						
Chloride	ND	1.00	mg/kg							
LCS (P3K2907-BS1)				Prepared: 11/29/23 Analyzed: 12/03/23						
Chloride	15.0		mg/kg	14.0		107	90-110			
LCS Dup (P3K2907-BSD1)				Prepared: 11/29/23 Analyzed: 12/03/23						
Chloride	14.7		mg/kg	14.0		105	90-110	1.51	10	
Calibration Check (P3K2907-CCV1)				Prepared: 11/29/23 Analyzed: 12/03/23						
Chloride	14.4		mg/kg	14.0		103	90-110			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]	Project: Benson Shugart Waterflood Unit #011
13000 West County Road 100	Project Number: 15304
Odessa TX, 79765	Project Manager: Blake Estep

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch P3K2907 - *** DEFAULT PREP ***

Matrix Spike (P3K2907-MS1)	Source: 3K21011-16			Prepared: 11/29/23 Analyzed: 12/02/23						
Chloride	150		mg/kg	100	42.6	108	80-120			
Matrix Spike (P3K2907-MS2)	Source: 3K28012-01			Prepared: 11/29/23 Analyzed: 12/02/23						
Chloride	98.5		mg/kg	100	0.325	98.2	80-120			
Matrix Spike Dup (P3K2907-MSD1)	Source: 3K21011-16			Prepared: 11/29/23 Analyzed: 12/02/23						
Chloride	161		mg/kg	100	42.6	119	80-120	7.05	20	
Matrix Spike Dup (P3K2907-MSD2)	Source: 3K28012-01			Prepared: 11/29/23 Analyzed: 12/02/23						
Chloride	112		mg/kg	100	0.325	112	80-120	12.7	20	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

E Tech Environmental & Safety Solutions, Inc. [1]
13000 West County Road 100
Odessa TX, 79765

Project: Benson Shugart Waterflood Unit #011
Project Number: 15304
Project Manager: Blake Estep

Notes and Definitions

ROI	Received on Ice
BULK	Samples received in Bulk soil containers may be biased low in the nC6-C12 TPH Range
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:



Date:

12/4/2023

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

PBETLAB
Permian Basin Environmental Lab., L.P.
1100 Hankin Hwy
Midland Texas 79701
Phone: 432-686-7235

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

13A

Project Manager: BLAKE ESTEP

Company Name: Etech Environmental & Safety Solutions, Inc.

Company Address: P.O. Box 62228

City/State/Zip: Midland, Texas 79711

Sampler Signature: email: @etechenv.com

Project Name: Beeson Shugart water flood unit #011
Project #: 15304 Project Loc: _____
Area: _____ PO#: 15304

PO#: 15704

☒ Bill EtechReport Format: STANDARD ☒ TRIP ☐ NPDES ☐ Analysis For:[illegible]

APPENDIX F

NMOCD Notifications

District I1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720**District II**811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720**District III**1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170**District IV**1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 306095

QUESTIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 306095
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nMCS0124834063
Incident Name	NMCS0124834063 BENSON SHUGART WATERFLOOD UNIT #011 @ 30-015-20528
Incident Type	Oil Release
Incident Status	Remediation Plan Approved
Incident Well	[30-015-20528] BENSON SHUGART WATERFLOOD UNIT #011

Location of Release Source	
Site Name	BENSON SHUGART WATERFLOOD UNIT #011
Date Release Discovered	06/04/2001
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	40
What is the estimated number of samples that will be gathered	5
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/21/2023
Time sampling will commence	08:00 AM
Warning: Notification can not be less than two business days prior to conducting final sampling.	
Please provide any information necessary for observers to contact samplers	Blake Estep 432-894-6038
Please provide any information necessary for navigation to sampling site	GPS: 32.717582, -103.935402

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

CONDITIONS

Action 306095

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 306095
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
abarnhill	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	1/30/2024

APPENDIX G

Approved Remediation Work Plan

P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213



Incident ID	nMCS0124834063
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>186</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

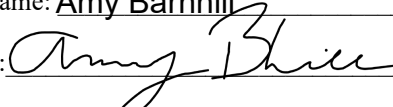
Characterization Report Checklist: *Each of the following items must be included in the report.*

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

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

Incident ID	nMCS0124834063
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Amy Barnhill Title: Water Advisor
Signature:  Date: 8-17-22
email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: Jocelyn Harimon Date: 08/17/2022



August 12, 2022

Robert Hamlet
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
PH #: 575-748-1283
Robert.Hamlet@state.nm.us

Re: Soil Remediation Workplan
Chevron USA
Benson Shugart Waterflood Unit #011 Release (nMCS0124834063)
GPS: N 32.71758° W 103.93540°
Unit Letter "I", Section 26, Township 18 South, Range 30 East
Eddy County, New Mexico

Dear Mr. Hamlet,

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Chevron USA (Chevron), has prepared this Soil Remediation Workplan for the Benson Shugart Waterflood Unit #011 Release Site (Release Site). The legal description of the Release Site is Unit Letter "I", Section 26, Township 18 South, Range 30 East, in Eddy County, New Mexico. The GPS coordinates for the site are N 32.71758° W 103.93540°. A Site Location Map and Aerial Proximity Map are provided as Figure 1 and Figure 2, respectively.

INTRODUCTION

On June 4, 2001, a reportable release occurred at the Release Site. The release was the result of a leak discovered in a tee fitting. Approximately eighty (80) barrels (bbls) of crude oil and two hundred (200) bbls of produced water was released with approximately sixty (60) bbls of crude oil and one hundred twenty (120) bbls of produced water recovered via vacuum trucks, for a net loss of twenty (20) bbls of crude oil and eighty (80) bbls of produced water. The initial Form C-141 is provided in Appendix A.

NMOCD SITE CLASSIFICATION

New Mexico Oil Conservation Division (NMOCD) assessment and cleanup levels for hydrocarbon and produced water releases are based on depth to groundwater and karst status and follow the criteria in the revised August 2018 Title 19 Chapter 15 part 29 New Mexico Administrative Code (19.15.29 NMAC) regulations. Groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE), New Mexico Bureau of Geology & Mineral Resources (NMBGMR), and United States Geological Survey (USGS) were accessed to determine if any registered water wells were located within a half-mile of the site. The databases identified three (3) water wells within a ½-mile radius. No water well is located within one thousand (1,000) feet (ft) of the release. The closest water well is USGS Well # 324244103561601 with a depth to water of one hundred eighty-six (186) feet below ground surface (bgs). The average depth to water in a half-mile radius is one hundred ninety (190) feet bgs. In addition, the site is listed as being in a medium Karst Topography region. See Appendix B for maps, along with water well data, detailing the site relative to groundwater locations. Based on the NMOCD site classification system, the following soil remediation levels were assigned to the Release Site:

- Benzene – 10 mg/Kg (ppm)
- Total BTEX – 50 mg/Kg (ppm)
- Total TPH – 100 mg/Kg (ppm)
- Chloride – 600 mg/Kg (ppm)

INITIAL ASSESSMENT AND DELINEATION ACTIVITIES

On January 5, 2022, Etech was onsite to perform the initial assessment and delineation of the release. Two (2) auger holes (Auger Hole 1 and Auger Hole 2) were installed in the inferred spill area to depths ranging from six (6) inches bgs to forty-eight (48) inches bgs. Refusal was encountered in Auger Hole 1 (AH-1) at a depth of thirty (30) inches bgs. Samples were collected and submitted to Europhins Laboratory in Midland, Texas for analysis of Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) by EPA method 8021B, Total Petroleum Hydrocarbons (TPH) by EPA method 8015M, and chlorides by EPA method 300.0. Analytical results for TPH were above the NMOCD remediation standards in Auger Hole 2 (AH-2) in interval 42-48” with a concentration of 702 milligram per kilogram (mg/Kg). All other analysis were below both the NMOCD Closure Criteria or Reclamation Standards. See Table 1 for analytical results. See Appendix C for attached photos detailing release and impact to pad. See Figure 3 for Delineation Plat.

On April 11, 2022, Etech conducted an additional sampling event to determine the vertical and horizontal extent of the impact. AH-2 was further sampled at a depth of seventy-two (72) inches bgs, and additional three (3) boring were installed in each cardinal direction of AH-2 to a depth ranging from six (6) inches to forty-eight (48) inches bgs. Samples were submitted to Europhins in Midland, Texas to be analyzed for BTEX, TPH, and chloride concentrations. All samples were below both the NMOCD Closure Criteria or Reclamation Standards. See Table 1 for analytical results. See Appendix C for attached photos detailing release and impact to pad. See Figure 3 for Delineation Plat.

SOIL DELINEATION AND REMEDIATION WORKPLAN

Etech proposes to complete the soil remediation in accordance with NMOCD rules and regulations which will entail the following:

- Impacted soils will be excavated to appropriate depths based on delineation data and stockpiled on plastic awaiting disposal.
- During excavation activities soils will be field screened utilizing chloride test kits and a PID meter for determination of laboratory sampling and additional excavation, if warranted.
- Upon completion of the excavation, confirmation soil samples will be collected every two hundred (200) square feet from the base and sidewalls (representing no more than 50 linear feet) of the excavated areas. Additional, discrete grab samples will be collected from wet or visibly stained areas inferred to have been affected by the release, as necessary. Samples will be submitted to Permian Basin Environmental Labs of Texas (PBELAB) for analysis of BTEX by EPA Method 8021B, TPH by EPA Method 8015M, and chlorides by EPA method 300.0.
- The impacted soils will be transported off-site for disposal at an NMOCD approved disposal facility.
- Upon completion of remediation and requisite soil sampling, the site will be backfilled with locally sourced, non-impacted "like" material from an approved off-site facility and brought back to grade.
- A closure report with final C-141 will be submitted to the NMOCD upon completion of remediation activities.

Once the soil remediation work plan has been approved by the NMOCD, Chevron will commence remediation activities. Upon completion of remediation activities, Chevron will complete the activities within ninety (90) days of approval and submit a "*Remediation Summary and Site Closure Request Report*" to the NMOCD.

If you have any questions, or if additional information is required, please feel free to call me at 432-563-2200 (office) or 432-894-6038 (cell).

Thank you,



Blake Estep
Project Manager
Etech Environmental & Safety Solutions, Inc.



Jeffrey Kindley, P.G.
Senior Project Manager/Geologist
Etech Environmental & Safety Solutions, Inc.

Attachments:

Figure 1 – Topographic Map

Figure 2 – Aerial Proximity Map

Figure 3 – Delineation Plat

Table 1 – Concentrations of BTEX, TPH, and Chloride in Soil - Delineation

Appendix A: Initial Release Notification and Corrective Action Form C-141

Appendix B: Groundwater Data Maps and Supporting Water Well Data

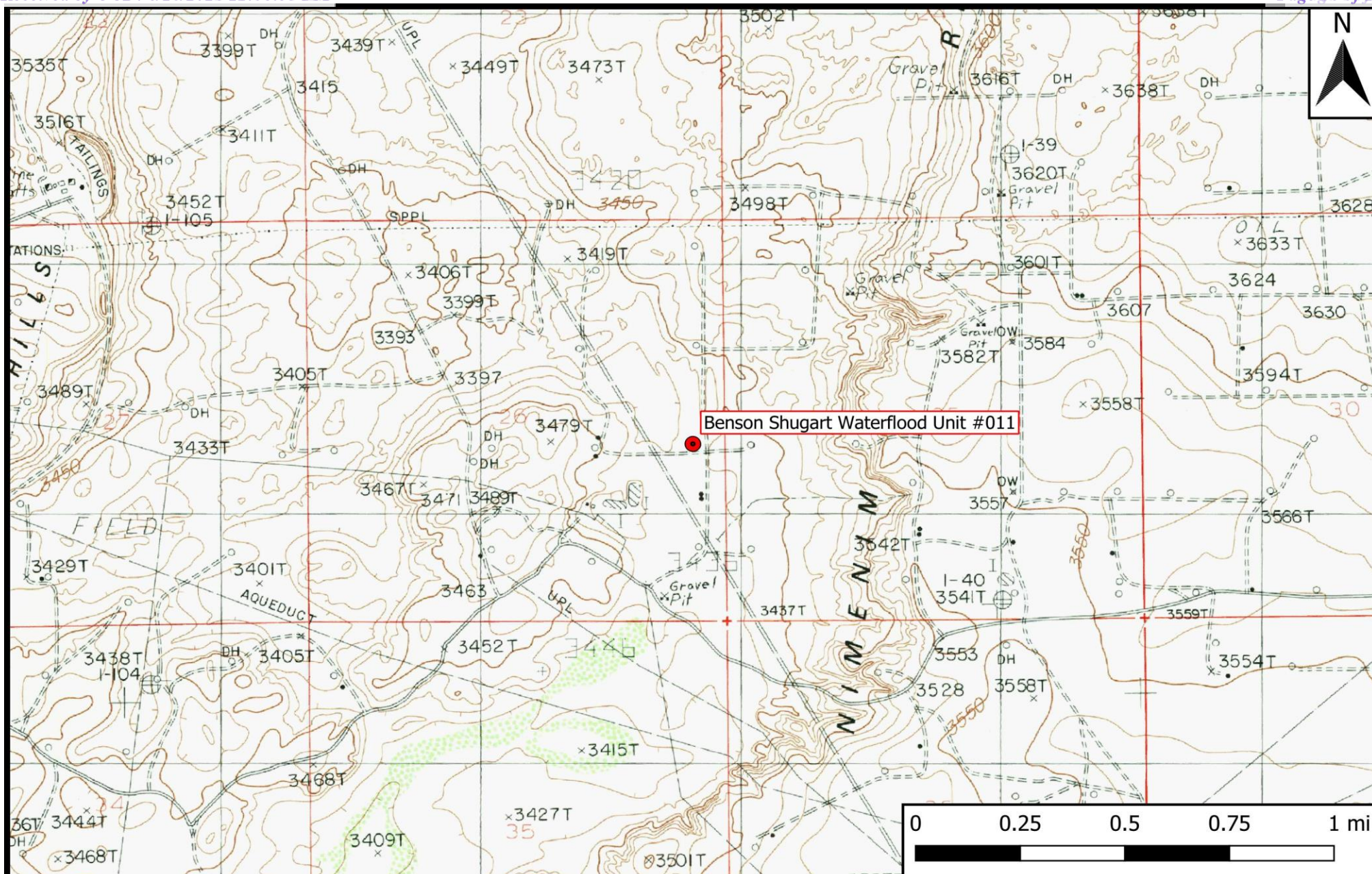
Appendix C: Photographic Documentation

Appendix D: Laboratory Analytical

cc: File

Figure 1

Topographic Map



Legend

- Site Location

Figure 1

Topographic Map
Chevron USA

Benson Shugart Waterflood Unit #011

GPS: 32.71758, -103.935401

Eddy County



Drafted: mag

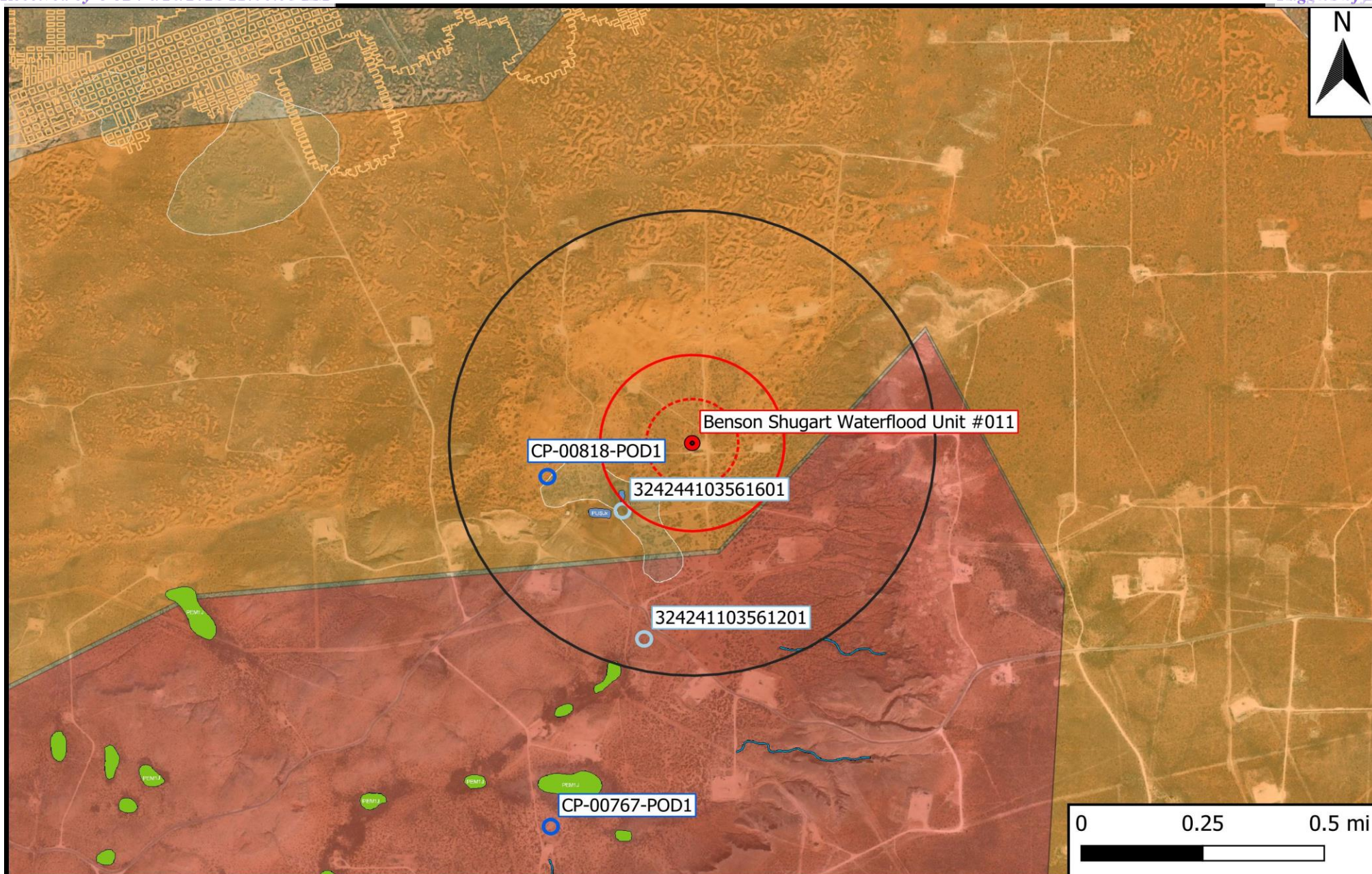
Checked: be

Date:

8/4/22

Figure 2

Aerial Proximity Map



Legend

- | | |
|------------------------|------------------------------|
| ● Site Location | ⋯ 500 Ft Radius |
| ○ Well - NMOSE | ⬜ 1000 Ft Radius |
| ○ Well - USGS | ⬜ 0.5 Mi Radius |
| — Potash Mine Workings | ■ 1% Annual Flood Chance |
| ■ Medium/High Karst | ■ Lake/Freshwater Pond |
| | ■ Emergent/Forested Wetlands |
| | ■ Riverine |

Figure 2

Aerial Proximity Map
Chevron USA
Benson Shugart Waterflood Unit #011
GPS: 32.71758, -103.935401
Eddy County

eTECH

Environmental & Safety Solutions, Inc.



Drafted: mag

Checked: be

Date:

8/4/22

Figure 3

Site and Sample Location Map



Table 1
Concentrations of BTEX, TPH, and Chloride in Soil

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL - Delineation

CHEVRON USA

BENSON SHUGART WATERFLOOD UNIT #011

EDDY COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	DEPTH	SAMPLE DATE	METHODS: SW 846-8021B						METHOD: SW 8015M					E 300.0
			BENZENE	TOLUENE	ETHYL- BENZENE	m, p - XYLENES	o - XYLENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C ₆ -C ₁₂	TPH DRO C ₁₂ -C ₂₈	TPH ORO C ₂₈ -C ₃₅	TOTAL TPH C ₆ -C ₃₅	CHLORIDE
Limits			10 mg/Kg						50 mg/Kg				100 mg/Kg	600 mg/Kg
Bottom Hole Sample Results														
Auger Hole 1	0-6"	1/5/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	162
Auger Hole 1	27-30"	1/5/2022	ND	ND	ND	ND	0.00306	ND	ND	ND	ND	ND	ND	46.9
Auger Hole 2	0-6"	1/5/2022	ND	ND	ND	ND	ND	ND	ND	ND	79.7	ND	79.7	13
Auger Hole 2	42-48"	1/5/2022	ND	ND	ND	ND	ND	ND	ND	ND	702	ND	702	48.3
Auger Hole 2	66-72"	4/11/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.6
South Auger Hole	0-6"	4/11/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	51.1
South Auger Hole	42-48"	4/11/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	95.8
East Auger Hole	0-6"	4/11/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.32
East Auger Hole	42-48"	4/11/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
West Auger Hole	0-6"	4/11/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	71.4
West Auger Hole	42-48"	4/11/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	85.1

Bold and Yellow Highlighted indicates Analyte Above NMOCD Regulatory Limit

ND - Analyte Not Detected at or above the laboratory reporting limit

* - Due to safety concerns regarding the production equipment, sample areas will be addressed at the time of permanent abandonment of the facility.

** - Sample area was eliminated during further excavation activities.

Appendix A

Initial Release Notification and Corrective Action Form C-141

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	NMCS0124834063
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Chevron USA	OGRID: 4323
Contact Name: Amy Barnhill	Contact Telephone: 432-687-7108
Contact email: ABarnhill@chevron.com	Incident # (assigned by OCD)
Contact mailing address: 6301 Deauville Blvd Midland, Tx 79706	

Location of Release Source

Latitude 32.7175636 _____ Longitude -103.935173 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Benson Shugart Waterflood Unit #11	Site Type: Oil
Date Release Discovered: 6-4-01	API# (if applicable)

Unit Letter	Section	Township	Range	County
I	26	18S	30E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 80	Volume Recovered (bbls) 60
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)


Cause of Release: Equipment failure, hole in T

Incident ID	NMCS0124834063
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Over 25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? This is an old Chesapeake spill, we are assuming it was reported in a timely manner.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Amy Barnhill	Title: Water Advisor
Signature: 	Date: 8-9-22
email: ABarnhill@chevron.com	Telephone: 432-687-7108
<u>OCD Only</u>	
Received by: Jocelyn Harimon	Date: 08/17/2022

Incident ID	nMCS0124834063
District RP	
Facility ID	
Application ID	

Remediation Plan

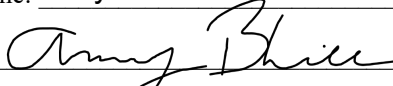
Remediation Plan Checklist: Each of the following items must be included in the plan.

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Amy Barnhill Title: Water Advisor
Signature:  Date: 8-17-22
email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

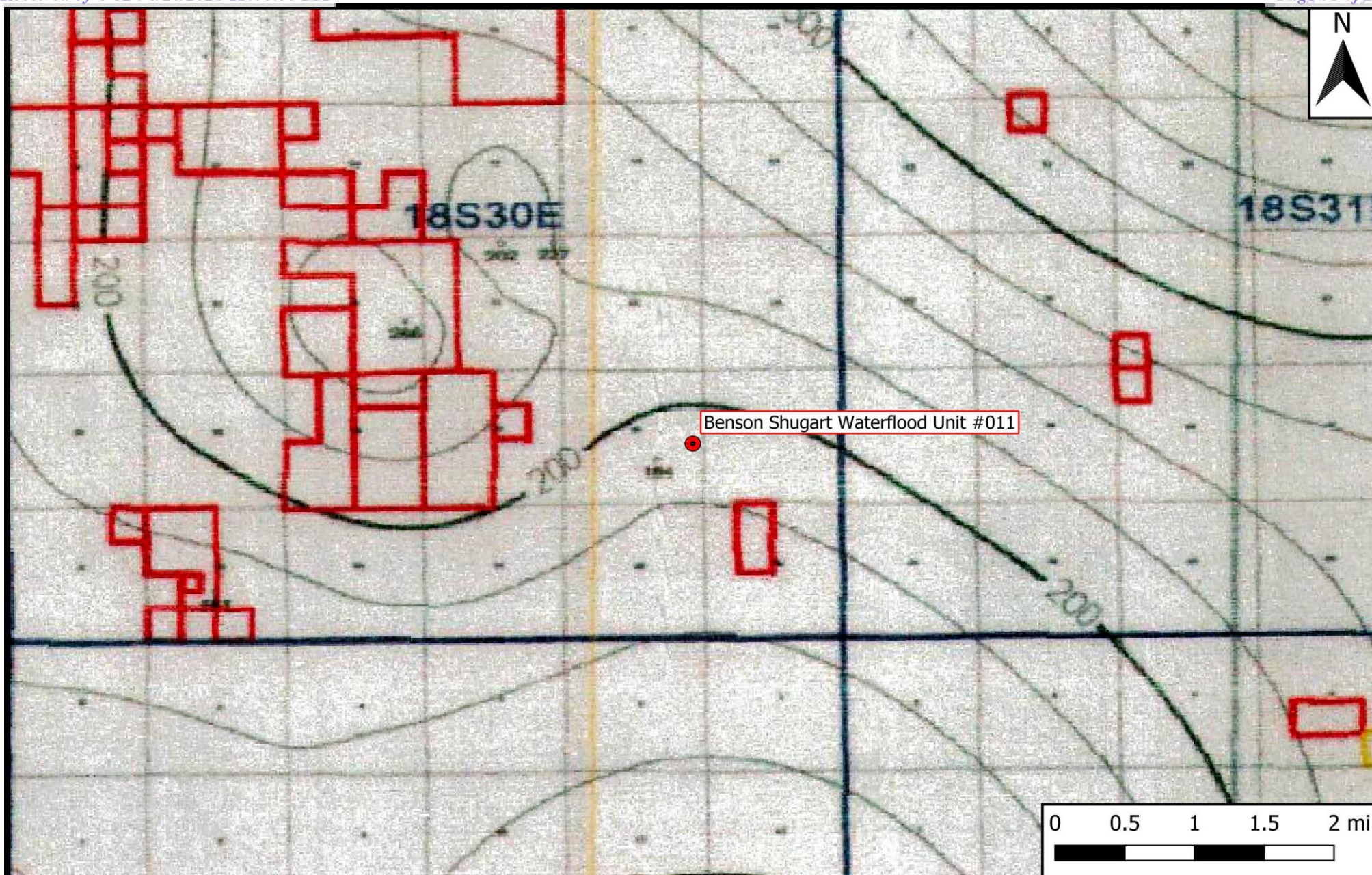
Received by: Jocelyn Harimon Date: 08/17/2022

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

Signature:  Date: 12/8/2022

Appendix B

Groundwater Data Maps and Supporting Water Well Data



Legend

- Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
Chevron USA
Benson Shugart Waterflood Unit #011
GPS: 32.71758, -103.935401
Eddy County



Drafted: mag

Checked: be

Date: 8/4/22



(In feet)

Average Depth to Water:	--
Minimum Depth:	--
Maximum Depth:	--

Radius: 804.67

WATER COLUMN/ AVERAGE DEPTH TO WATER



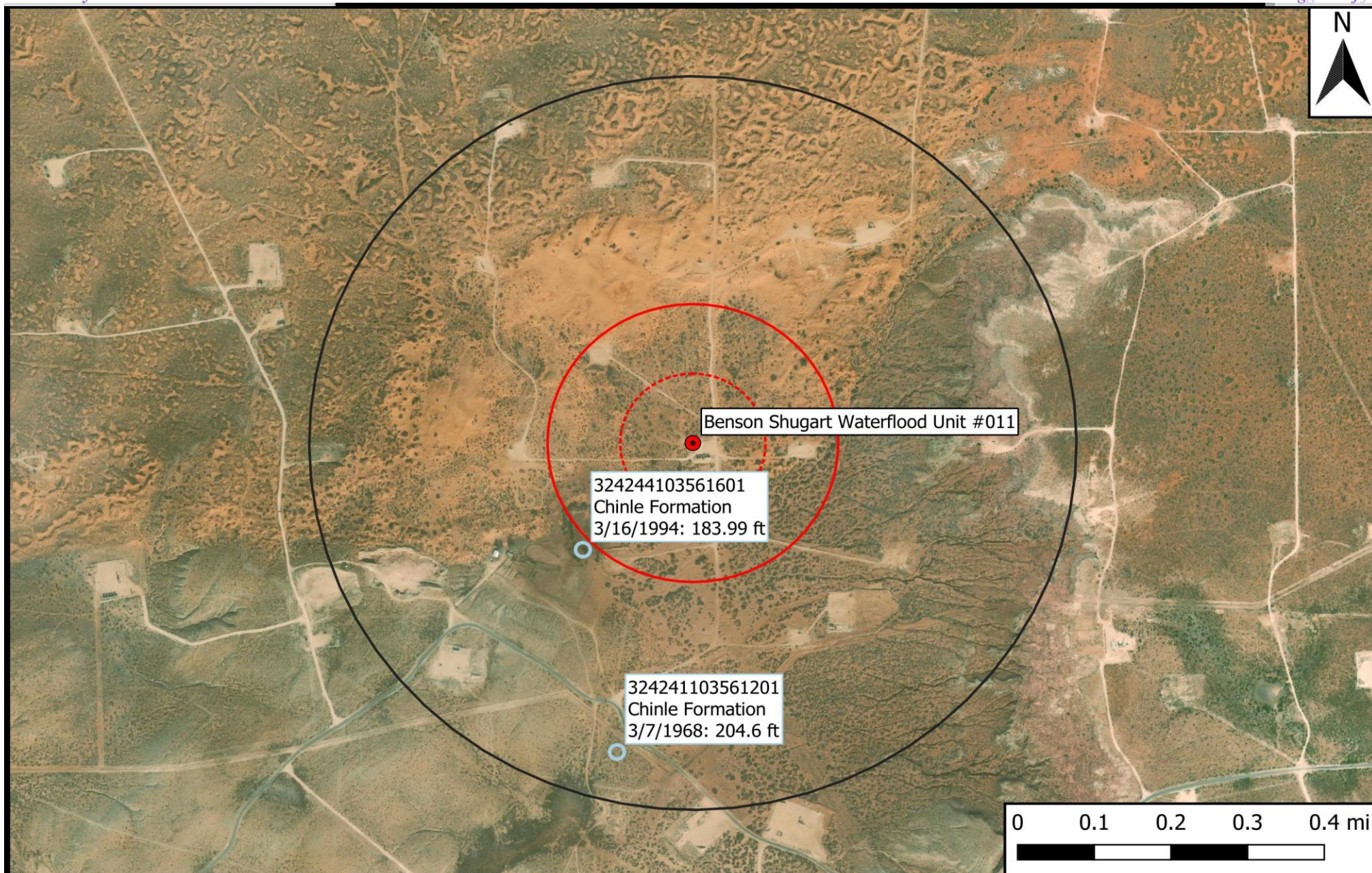
New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)	
		(quarters are smallest to largest)				X	Y
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tw	Rng
	CP 00818 POD1	1	4	26	18S	30E	599289 3620364*
Driller License: 122		Driller Company: UNKNOWN					
Driller Name:							
Drill Start Date:		Drill Finish Date:		Plug Date:			
Log File Date:		PCW Rcv Date:		Source:		Shallow	
Pump Type:		Pipe Discharge Size:		Estimated Yield:		20 GPM	
Casing Size: 7.00		Depth Well:		240 feet		Depth Water:	

*UTM location was derived from PLSS - see Help

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



Legend

- Site Location
- Well - USGS
- 500 Ft Radius
- 1000 Ft Radius
- 0.5 Mi Radius

Figure 5

USGS Well Proximity Map
Chevron USA
Benson Shugart Waterflood Unit #011
GPS: 32.71758, -103.935401
Eddy County



Drafted: mag

Checked: be

Date:

8/4/22



[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

GO

[Click for News Bulletins](#)

[Groundwater levels for the Nation](#)

! Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 324241103561201

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 324241103561201 18S.30E.26.4140

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°42'41", Longitude 103°56'12" NAD27

Land-surface elevation 3,432 feet above NAVD88

The depth of the well is 230 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Chinle Formation (231CHNL) local aquifer.

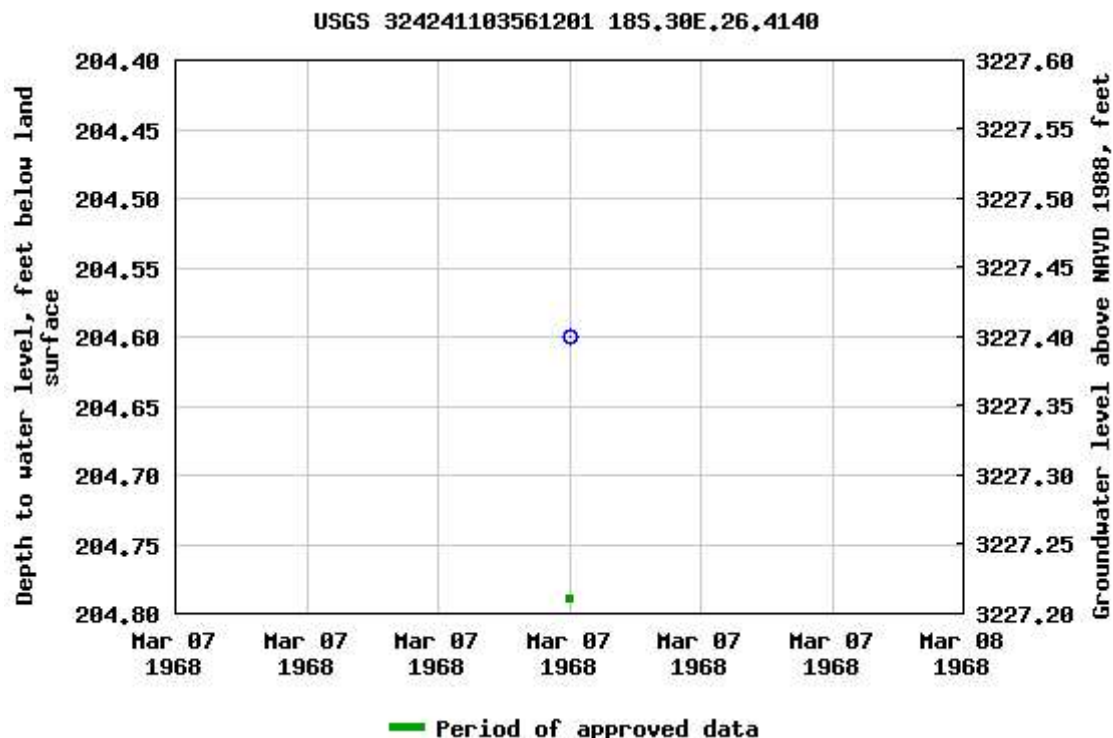
Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2022-08-04 10:37:40 EDT

0.55 0.48 nadww01





[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

GO

[Click for News Bulletins](#)

[Groundwater levels for the Nation](#)

! Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 324244103561601

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 324244103561601 18S.30E.26.414144

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°42'55.8", Longitude 103°56'16.4" NAD83

Land-surface elevation 3,431 feet above NAVD88

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Chinle Formation (231CHNL) local aquifer.

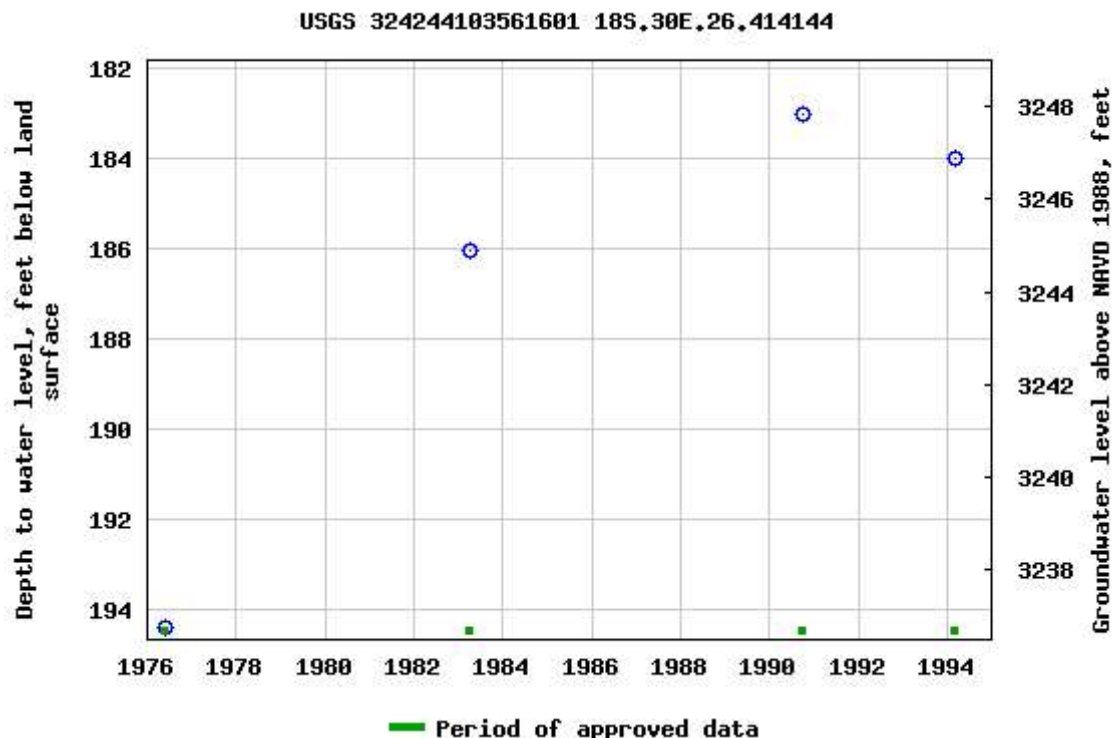
Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2022-08-04 10:37:41 EDT

0.55 0.49 nadww01



Appendix C

Photographic Documentation

Project Name: Benson Shugart Waterflood Unit #011
Project No: 15304

Photographic Documentation

Project Name: Benson Shugart Waterflood Unit #011
Project No: 15304

Photographic Documentation

Photo No: 3.	 <p>1/5/22, 11:16 AM</p>
Direction Taken: North	
Description: View of the impacted area.	

Appendix D

Laboratory Analytical



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-9970-1

Client Project/Site: Benson Shugart Waterflood unit #011

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Brandon Wilson

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
1/13/2022 8:35:36 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

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

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

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Laboratory Job ID: 880-9970-1

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	9
QC Sample Results	10
QC Association Summary	14
Lab Chronicle	16
Certification Summary	18
Method Summary	19
Sample Summary	20
Chain of Custody	21
Receipt Checklists	22

Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Job ID: 880-9970-1

Laboratory: Eurofins Midland

Narrative	
	Job Narrative 880-9970-1

Receipt

The samples were received on 1/7/2022 1:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

1
2
3
4
5
6
7
8
9
10
11
12
13
14

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Client Sample ID: Auger Hole 1

Lab Sample ID: 880-9970-1

Date Collected: 01/05/22 11:10

Matrix: Solid

Date Received: 01/07/22 13:05

Sample Depth: 0-6"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 23:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 23:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 23:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/07/22 14:37	01/10/22 23:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 23:14	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/07/22 14:37	01/10/22 23:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	01/07/22 14:37	01/10/22 23:14	1
1,4-Difluorobenzene (Surr)	103		70 - 130	01/07/22 14:37	01/10/22 23:14	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/12/22 13:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/12/22 14:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 15:26	01/08/22 17:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 15:26	01/08/22 17:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 15:26	01/08/22 17:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130	01/07/22 15:26	01/08/22 17:52	1
o-Terphenyl	76		70 - 130	01/07/22 15:26	01/08/22 17:52	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	162		4.99		mg/Kg			01/13/22 10:24	1

Client Sample ID: Auger Hole 1

Lab Sample ID: 880-9970-2

Date Collected: 01/05/22 11:12

Matrix: Solid

Date Received: 01/07/22 13:05

Sample Depth: 27-30"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 23:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 23:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 23:35	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/07/22 14:37	01/10/22 23:35	1
o-Xylene	0.00306		0.00200		mg/Kg		01/07/22 14:37	01/10/22 23:35	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/07/22 14:37	01/10/22 23:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	01/07/22 14:37	01/10/22 23:35	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Client Sample ID: Auger Hole 1

Lab Sample ID: 880-9970-2

Date Collected: 01/05/22 11:12

Matrix: Solid

Date Received: 01/07/22 13:05

Sample Depth: 27-30"

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	95		70 - 130	01/07/22 14:37	01/10/22 23:35	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/12/22 13:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/12/22 14:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 15:26	01/08/22 18:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/07/22 15:26	01/08/22 18:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 15:26	01/08/22 18:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130				01/07/22 15:26	01/08/22 18:12	1
o-Terphenyl	75		70 - 130				01/07/22 15:26	01/08/22 18:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46.9		4.97		mg/Kg			01/13/22 10:36	1

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-9970-3

Date Collected: 01/05/22 11:14

Matrix: Solid

Date Received: 01/07/22 13:05

Sample Depth: 0-6"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/07/22 14:37	01/10/22 23:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/07/22 14:37	01/10/22 23:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/07/22 14:37	01/10/22 23:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/07/22 14:37	01/10/22 23:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/07/22 14:37	01/10/22 23:55	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/07/22 14:37	01/10/22 23:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	01/07/22 14:37	01/10/22 23:55	1
1,4-Difluorobenzene (Surr)	90		70 - 130	01/07/22 14:37	01/10/22 23:55	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/12/22 13:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	79.7		49.9		mg/Kg			01/12/22 14:00	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-9970-3

Date Collected: 01/05/22 11:14

Matrix: Solid

Date Received: 01/07/22 13:05

Sample Depth: 0-6"

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 15:26	01/08/22 18:53	1
Diesel Range Organics (Over C10-C28)	79.7		49.9		mg/Kg		01/07/22 15:26	01/08/22 18:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 15:26	01/08/22 18:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130				01/07/22 15:26	01/08/22 18:53	1
o-Terphenyl	76		70 - 130				01/07/22 15:26	01/08/22 18:53	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.0		4.95		mg/Kg			01/13/22 10:54	1

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-9970-4

Date Collected: 01/05/22 11:16

Matrix: Solid

Date Received: 01/07/22 13:05

Sample Depth: 42-48"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/11/22 00:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/11/22 00:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/11/22 00:16	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/07/22 14:37	01/11/22 00:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/11/22 00:16	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/07/22 14:37	01/11/22 00:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	148	S1+	70 - 130				01/07/22 14:37	01/11/22 00:16	1
1,4-Difluorobenzene (Surr)	81		70 - 130				01/07/22 14:37	01/11/22 00:16	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/12/22 13:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	702		50.0		mg/Kg			01/12/22 14:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 15:26	01/08/22 19:13	1
Diesel Range Organics (Over C10-C28)	702		50.0		mg/Kg		01/07/22 15:26	01/08/22 19:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 15:26	01/08/22 19:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130				01/07/22 15:26	01/08/22 19:13	1
o-Terphenyl	76		70 - 130				01/07/22 15:26	01/08/22 19:13	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Client Sample ID: Auger Hole 2
Date Collected: 01/05/22 11:16
Date Received: 01/07/22 13:05
Sample Depth: 42-48"

Lab Sample ID: 880-9970-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48.3		5.05		mg/Kg			01/13/22 11:05	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-9970-1	Auger Hole 1	123	103
880-9970-1 MS	Auger Hole 1	103	94
880-9970-1 MSD	Auger Hole 1	106	95
880-9970-2	Auger Hole 1	120	95
880-9970-3	Auger Hole 2	109	90
880-9970-4	Auger Hole 2	148 S1+	81
LCS 880-16282/1-A	Lab Control Sample	102	98
LCSD 880-16282/2-A	Lab Control Sample Dup	107	100
MB 880-16273/5-A	Method Blank	120	108
MB 880-16282/5-A	Method Blank	120	106
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-9968-A-1-C MS	Matrix Spike	76	73
880-9968-A-1-D MSD	Matrix Spike Duplicate	78	74
880-9970-1	Auger Hole 1	71	76
880-9970-2	Auger Hole 1	71	75
880-9970-3	Auger Hole 2	71	76
880-9970-4	Auger Hole 2	74	76
LCS 880-16294/2-A	Lab Control Sample	112	113
LCSD 880-16294/3-A	Lab Control Sample Dup	112	111
MB 880-16294/1-A	Method Blank	75	82
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-16273/5-A

Matrix: Solid

Analysis Batch: 16341

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 16273

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:21	01/10/22 10:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:21	01/10/22 10:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:21	01/10/22 10:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/07/22 14:21	01/10/22 10:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:21	01/10/22 10:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 14:21	01/10/22 10:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	01/07/22 14:21	01/10/22 10:50	1
1,4-Difluorobenzene (Surr)	108		70 - 130	01/07/22 14:21	01/10/22 10:50	1

Lab Sample ID: MB 880-16282/5-A

Matrix: Solid

Analysis Batch: 16341

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 16282

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 14:37	01/10/22 22:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	01/07/22 14:37	01/10/22 22:45	1
1,4-Difluorobenzene (Surr)	106		70 - 130	01/07/22 14:37	01/10/22 22:45	1

Lab Sample ID: LCS 880-16282/1-A

Matrix: Solid

Analysis Batch: 16341

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 16282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09284		mg/Kg		93	70 - 130
Toluene	0.100	0.09530		mg/Kg		95	70 - 130
Ethylbenzene	0.100	0.09449		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.1883		mg/Kg		94	70 - 130
o-Xylene	0.100	0.08928		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: LCSD 880-16282/2-A

Matrix: Solid

Analysis Batch: 16341

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 16282

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09551		mg/Kg		96	70 - 130	3	35

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

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

Lab Sample ID: LCSD 880-16282/2-A

Matrix: Solid

Analysis Batch: 16341

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 16282

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	0.100	0.09452		mg/Kg		95	70 - 130	1	35
Ethylbenzene	0.100	0.09939		mg/Kg		99	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1946		mg/Kg		97	70 - 130	3	35
o-Xylene	0.100	0.09623		mg/Kg		96	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 880-9970-1 MS

Matrix: Solid

Analysis Batch: 16341

Client Sample ID: Auger Hole 1

Prep Type: Total/NA

Prep Batch: 16282

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.07914		mg/Kg		79	70 - 130
Toluene	<0.00200	U	0.0998	0.08145		mg/Kg		82	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08486		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1614		mg/Kg		81	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08289		mg/Kg		83	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-9970-1 MSD

Matrix: Solid

Analysis Batch: 16341

Client Sample ID: Auger Hole 1

Prep Type: Total/NA

Prep Batch: 16282

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.07850		mg/Kg		79	70 - 130	1	35
Toluene	<0.00200	U	0.100	0.08377		mg/Kg		84	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.100	0.08307		mg/Kg		83	70 - 130	2	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1604		mg/Kg		80	70 - 130	1	35
o-Xylene	<0.00200	U	0.100	0.08218		mg/Kg		82	70 - 130	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

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

Lab Sample ID: MB 880-16294/1-A

Matrix: Solid

Analysis Batch: 16326

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 16294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 15:26	01/08/22 13:27	1

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

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

Lab Sample ID: MB 880-16294/1-A

Matrix: Solid

Analysis Batch: 16326

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 16294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 15:26	01/08/22 13:27	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 15:26	01/08/22 13:27	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130				01/07/22 15:26	01/08/22 13:27	1
o-Terphenyl	82		70 - 130				01/07/22 15:26	01/08/22 13:27	1

Lab Sample ID: LCS 880-16294/2-A

Matrix: Solid

Analysis Batch: 16326

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 16294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	869.2		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	908.2		mg/Kg		91	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	112		70 - 130				
o-Terphenyl	113		70 - 130				

Lab Sample ID: LCSD 880-16294/3-A

Matrix: Solid

Analysis Batch: 16326

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 16294

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	850.2		mg/Kg		85	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	861.0		mg/Kg		86	70 - 130	5	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	112		70 - 130						
o-Terphenyl	111		70 - 130						

Lab Sample ID: 880-9968-A-1-C MS

Matrix: Solid

Analysis Batch: 16326

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 16294

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	952.2		mg/Kg		96	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	849.7		mg/Kg		81	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	76		70 - 130						
o-Terphenyl	73		70 - 130						

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

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

Lab Sample ID: 880-9968-A-1-D MSD

Matrix: Solid

Analysis Batch: 16326

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 16294

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	936.4		mg/Kg		94	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	869.7		mg/Kg		83	70 - 130	2	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	78		70 - 130								
o-Terphenyl	74		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-16443/1-A

Matrix: Solid

Analysis Batch: 16558

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/13/22 08:45	1

Lab Sample ID: LCS 880-16443/2-A

Matrix: Solid

Analysis Batch: 16558

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	243.0		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-16443/3-A

Matrix: Solid

Analysis Batch: 16558

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	246.7		mg/Kg		99	90 - 110	2	20

Lab Sample ID: 880-9969-A-4-D MS

Matrix: Solid

Analysis Batch: 16558

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	211		251	464.1		mg/Kg		101	90 - 110

Lab Sample ID: 880-9969-A-4-E MSD

Matrix: Solid

Analysis Batch: 16558

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	211		251	456.4		mg/Kg		98	90 - 110	2	20

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

GC VOA

Prep Batch: 16273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-16273/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 16282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9970-1	Auger Hole 1	Total/NA	Solid	5035	
880-9970-2	Auger Hole 1	Total/NA	Solid	5035	
880-9970-3	Auger Hole 2	Total/NA	Solid	5035	
880-9970-4	Auger Hole 2	Total/NA	Solid	5035	
MB 880-16282/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16282/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16282/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9970-1 MS	Auger Hole 1	Total/NA	Solid	5035	
880-9970-1 MSD	Auger Hole 1	Total/NA	Solid	5035	

Analysis Batch: 16341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9970-1	Auger Hole 1	Total/NA	Solid	8021B	16282
880-9970-2	Auger Hole 1	Total/NA	Solid	8021B	16282
880-9970-3	Auger Hole 2	Total/NA	Solid	8021B	16282
880-9970-4	Auger Hole 2	Total/NA	Solid	8021B	16282
MB 880-16273/5-A	Method Blank	Total/NA	Solid	8021B	16273
MB 880-16282/5-A	Method Blank	Total/NA	Solid	8021B	16282
LCS 880-16282/1-A	Lab Control Sample	Total/NA	Solid	8021B	16282
LCSD 880-16282/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16282
880-9970-1 MS	Auger Hole 1	Total/NA	Solid	8021B	16282
880-9970-1 MSD	Auger Hole 1	Total/NA	Solid	8021B	16282

Analysis Batch: 16668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9970-1	Auger Hole 1	Total/NA	Solid	Total BTEX	
880-9970-2	Auger Hole 1	Total/NA	Solid	Total BTEX	
880-9970-3	Auger Hole 2	Total/NA	Solid	Total BTEX	
880-9970-4	Auger Hole 2	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 16294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9970-1	Auger Hole 1	Total/NA	Solid	8015NM Prep	
880-9970-2	Auger Hole 1	Total/NA	Solid	8015NM Prep	
880-9970-3	Auger Hole 2	Total/NA	Solid	8015NM Prep	
880-9970-4	Auger Hole 2	Total/NA	Solid	8015NM Prep	
MB 880-16294/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16294/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-16294/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-9968-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-9968-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 16326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9970-1	Auger Hole 1	Total/NA	Solid	8015B NM	16294

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

GC Semi VOA (Continued)

Analysis Batch: 16326 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9970-2	Auger Hole 1	Total/NA	Solid	8015B NM	16294
880-9970-3	Auger Hole 2	Total/NA	Solid	8015B NM	16294
880-9970-4	Auger Hole 2	Total/NA	Solid	8015B NM	16294
MB 880-16294/1-A	Method Blank	Total/NA	Solid	8015B NM	16294
LCS 880-16294/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16294
LCSD 880-16294/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16294
880-9968-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	16294
880-9968-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	16294

Analysis Batch: 16554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9970-1	Auger Hole 1	Total/NA	Solid	8015 NM	
880-9970-2	Auger Hole 1	Total/NA	Solid	8015 NM	
880-9970-3	Auger Hole 2	Total/NA	Solid	8015 NM	
880-9970-4	Auger Hole 2	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 16443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9970-1	Auger Hole 1	Soluble	Solid	DI Leach	
880-9970-2	Auger Hole 1	Soluble	Solid	DI Leach	
880-9970-3	Auger Hole 2	Soluble	Solid	DI Leach	
880-9970-4	Auger Hole 2	Soluble	Solid	DI Leach	
MB 880-16443/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16443/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16443/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9969-A-4-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-9969-A-4-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 16558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9970-1	Auger Hole 1	Soluble	Solid	300.0	16443
880-9970-2	Auger Hole 1	Soluble	Solid	300.0	16443
880-9970-3	Auger Hole 2	Soluble	Solid	300.0	16443
880-9970-4	Auger Hole 2	Soluble	Solid	300.0	16443
MB 880-16443/1-A	Method Blank	Soluble	Solid	300.0	16443
LCS 880-16443/2-A	Lab Control Sample	Soluble	Solid	300.0	16443
LCSD 880-16443/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16443
880-9969-A-4-D MS	Matrix Spike	Soluble	Solid	300.0	16443
880-9969-A-4-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	16443

Eurofins Midland

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Client Sample ID: Auger Hole 1

Lab Sample ID: 880-9970-1

Date Collected: 01/05/22 11:10

Matrix: Solid

Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	16282	01/07/22 14:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16341	01/10/22 23:14	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16294	01/07/22 15:26	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16326	01/08/22 17:52	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	16443	01/10/22 13:40	CH	XEN MID
Soluble	Analysis	300.0		1			16558	01/13/22 10:24	SC	XEN MID

Client Sample ID: Auger Hole 1

Lab Sample ID: 880-9970-2

Date Collected: 01/05/22 11:12

Matrix: Solid

Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	16282	01/07/22 14:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16341	01/10/22 23:35	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16294	01/07/22 15:26	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16326	01/08/22 18:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	16443	01/10/22 13:40	CH	XEN MID
Soluble	Analysis	300.0		1			16558	01/13/22 10:36	SC	XEN MID

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-9970-3

Date Collected: 01/05/22 11:14

Matrix: Solid

Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	16282	01/07/22 14:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16341	01/10/22 23:55	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16294	01/07/22 15:26	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16326	01/08/22 18:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	16443	01/10/22 13:40	CH	XEN MID
Soluble	Analysis	300.0		1			16558	01/13/22 10:54	SC	XEN MID

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-9970-4

Date Collected: 01/05/22 11:16

Matrix: Solid

Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	16282	01/07/22 14:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16341	01/11/22 00:16	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-9970-4

Date Collected: 01/05/22 11:16

Matrix: Solid

Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	16294	01/07/22 15:26	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16326	01/08/22 19:13	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	16443	01/10/22 13:40	CH	XEN MID
Soluble	Analysis	300.0		1			16558	01/13/22 11:05	SC	XEN MID

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

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

Protocol References:

- ASTM = ASTM International
- MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood unit #011

Job ID: 880-9970-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-9970-1	Auger Hole 1	Solid	01/05/22 11:10	01/07/22 13:05	0-6"
880-9970-2	Auger Hole 1	Solid	01/05/22 11:12	01/07/22 13:05	27-30"
880-9970-3	Auger Hole 2	Solid	01/05/22 11:14	01/07/22 13:05	0-6"
880-9970-4	Auger Hole 2	Solid	01/05/22 11:16	01/07/22 13:05	42-48"

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432-704-5440) EL Paso TX (915)585-3443 Lubbock TX (806)794-1296
Phoenix AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-755-392-7550)
Hobbs NM (575-392-7550)

Work Order No: 9970

Page 1 of 1
www.xenco.com

1/13/2022

Project Manager	Brandon Wilson	Bill to (if different)	
Company Name	Etech Environmental	Company Name	
Address	13000 W CR 100	Address	
City, State ZIP	Odessa, Tx 79765	City, State ZIP	
Phone	432-563-2200	Email	brandon@etecheny.com, blake@etecheny.com

Work Order Comments			
Program: UST/PST	<input type="checkbox"/> PRP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:			
Reporting Level II	<input type="checkbox"/> Level III	<input type="checkbox"/> PST/UST	<input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables	EDD <input type="checkbox"/>	Adapt <input type="checkbox"/>	Other <input type="checkbox"/>

Project Name	Benson Shugart Waterflood Unit #011	Turn Around
Project Number	15304	Routine <input checked="" type="checkbox"/>
P O Number	15304	Rush
Sampler's Name	Blake Estep	Due Date

SAMPLE RECEIPT		Temp Blank	Yes	No	Wet Ice	Yes	No
Temperature (°C)		53/54			Thermometer ID		
Received Intact.		Yes	No		123		
Cooler Custody Seals		Yes	No	N/A	Correction Factor		10
Sample Custody Seals		Yes	No	N/A	Total Containers		

[illegible]

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

8RCRA	13PPM	Texas	11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	Sn	U	V	Zn	
<hr/>																																
TCLP / SPLP	6010	8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U														
																		1631 / 245.1 / 7470 / 7477														

1631 / 245.1 / 7470 / 7471 Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1 <i>[Signature]</i>	<i>[Signature]</i>	1-7-22 1305	2		
3			4		
5			6		

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-9970-1

Login Number: 9970

List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

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



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-13746-1

Laboratory Sample Delivery Group: 15304

Client Project/Site: Benson Shugart Waterflood Unit #011

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Brandon Wilson

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
4/21/2022 10:18:28 AM

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

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

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

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

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Laboratory Job ID: 880-13746-1
SDG: 15304

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	11
QC Sample Results	12
QC Association Summary	16
Lab Chronicle	19
Certification Summary	22
Method Summary	23
Sample Summary	24
Chain of Custody	25
Receipt Checklists	26

Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Job ID: 880-13746-1

Laboratory: Eurofins Midland

Narrative	
	Job Narrative 880-13746-1

Receipt

The samples were received on 4/14/2022 4:29 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.2°C

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-23575 and analytical batch 880-23584 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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

1
2
3
4
5
6
7
8
9
10
11
12
13
14

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Client Sample ID: South Auger Hole

Lab Sample ID: 880-13746-1

Date Collected: 04/11/22 12:00

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 0 - 6"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/19/22 17:00	04/20/22 16:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/19/22 17:00	04/20/22 16:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/19/22 17:00	04/20/22 16:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/19/22 17:00	04/20/22 16:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/19/22 17:00	04/20/22 16:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/19/22 17:00	04/20/22 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	04/19/22 17:00	04/20/22 16:46	1
1,4-Difluorobenzene (Surr)	99		70 - 130	04/19/22 17:00	04/20/22 16:46	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/21/22 11:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/15/22 15:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	49.9		mg/Kg		04/15/22 08:43	04/15/22 11:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1	49.9		mg/Kg		04/15/22 08:43	04/15/22 11:27	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 11:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130	04/15/22 08:43	04/15/22 11:27	1
o-Terphenyl	73		70 - 130	04/15/22 08:43	04/15/22 11:27	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	51.1		4.98		mg/Kg			04/19/22 14:04	1

Client Sample ID: South Auger Hole

Lab Sample ID: 880-13746-2

Date Collected: 04/11/22 12:02

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 42 - 48"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 17:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 17:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 17:23	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		04/19/22 17:00	04/20/22 17:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 17:23	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		04/19/22 17:00	04/20/22 17:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	04/19/22 17:00	04/20/22 17:23	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Client Sample ID: South Auger Hole

Lab Sample ID: 880-13746-2

Date Collected: 04/11/22 12:02

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 42 - 48"

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	97		70 - 130	04/19/22 17:00	04/20/22 17:23	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			04/21/22 11:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/15/22 15:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 13:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 13:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 13:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130				04/15/22 08:43	04/15/22 13:33	1
o-Terphenyl	77		70 - 130				04/15/22 08:43	04/15/22 13:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	95.8		4.99		mg/Kg			04/19/22 14:11	1

Client Sample ID: East Auger Hole

Lab Sample ID: 880-13746-3

Date Collected: 04/11/22 12:04

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 0 - 6"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/19/22 17:00	04/20/22 17:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/19/22 17:00	04/20/22 17:43	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/19/22 17:00	04/20/22 17:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/19/22 17:00	04/20/22 17:43	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/19/22 17:00	04/20/22 17:43	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/19/22 17:00	04/20/22 17:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	04/19/22 17:00	04/20/22 17:43	1
1,4-Difluorobenzene (Surr)	99		70 - 130	04/19/22 17:00	04/20/22 17:43	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/21/22 11:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/15/22 15:35	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Client Sample ID: East Auger Hole

Lab Sample ID: 880-13746-3

Date Collected: 04/11/22 12:04

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 0 - 6"

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 13:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 13:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 13:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130				04/15/22 08:43	04/15/22 13:54	1
o-Terphenyl	78		70 - 130				04/15/22 08:43	04/15/22 13:54	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.32		4.95		mg/Kg			04/19/22 14:17	1

Client Sample ID: East Auger Hole

Lab Sample ID: 880-13746-4

Date Collected: 04/11/22 12:06

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 42 - 48"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/19/22 17:00	04/20/22 18:04	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/19/22 17:00	04/20/22 18:04	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/19/22 17:00	04/20/22 18:04	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		04/19/22 17:00	04/20/22 18:04	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/19/22 17:00	04/20/22 18:04	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		04/19/22 17:00	04/20/22 18:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130				04/19/22 17:00	04/20/22 18:04	1
1,4-Difluorobenzene (Surr)	98		70 - 130				04/19/22 17:00	04/20/22 18:04	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			04/21/22 11:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/15/22 15:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/15/22 08:43	04/15/22 14:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/15/22 08:43	04/15/22 14:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/15/22 08:43	04/15/22 14:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	70		70 - 130				04/15/22 08:43	04/15/22 14:15	1
o-Terphenyl	76		70 - 130				04/15/22 08:43	04/15/22 14:15	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Client Sample ID: East Auger Hole

Lab Sample ID: 880-13746-4

Date Collected: 04/11/22 12:06

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 42 - 48"

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.01	U	5.01		mg/Kg			04/19/22 14:36	1

Client Sample ID: West Auger Hole

Lab Sample ID: 880-13746-5

Date Collected: 04/11/22 12:08

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 0 - 6"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/19/22 17:00	04/20/22 18:24	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/19/22 17:00	04/20/22 18:24	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/19/22 17:00	04/20/22 18:24	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		04/19/22 17:00	04/20/22 18:24	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/19/22 17:00	04/20/22 18:24	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		04/19/22 17:00	04/20/22 18:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				04/19/22 17:00	04/20/22 18:24	1
1,4-Difluorobenzene (Surr)	98		70 - 130				04/19/22 17:00	04/20/22 18:24	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			04/21/22 11:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/15/22 15:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 14:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 14:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 14:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130				04/15/22 08:43	04/15/22 14:36	1
o-Terphenyl	82		70 - 130				04/15/22 08:43	04/15/22 14:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	71.4		4.98		mg/Kg			04/19/22 14:42	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Client Sample ID: West Auger Hole

Lab Sample ID: 880-13746-6

Date Collected: 04/11/22 12:10

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 42 - 48"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/19/22 17:00	04/20/22 18:45	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/19/22 17:00	04/20/22 18:45	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/19/22 17:00	04/20/22 18:45	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		04/19/22 17:00	04/20/22 18:45	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/19/22 17:00	04/20/22 18:45	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		04/19/22 17:00	04/20/22 18:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	04/19/22 17:00	04/20/22 18:45	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/19/22 17:00	04/20/22 18:45	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			04/21/22 11:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/15/22 15:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 14:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 14:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/15/22 08:43	04/15/22 14:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	73		70 - 130	04/15/22 08:43	04/15/22 14:57	1
o-Terphenyl	82		70 - 130	04/15/22 08:43	04/15/22 14:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85.1		5.04		mg/Kg			04/19/22 14:48	1

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-13746-7

Date Collected: 04/11/22 12:12

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 66 - 72"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 19:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 19:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 19:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/19/22 17:00	04/20/22 19:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 19:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/19/22 17:00	04/20/22 19:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	04/19/22 17:00	04/20/22 19:05	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-13746-7

Date Collected: 04/11/22 12:12

Matrix: Solid

Date Received: 04/14/22 16:29

Sample Depth: 66 - 72"

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	87		70 - 130	04/19/22 17:00	04/20/22 19:05	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			04/21/22 11:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/15/22 15:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/15/22 08:43	04/15/22 15:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/15/22 08:43	04/15/22 15:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/15/22 08:43	04/15/22 15:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	72		70 - 130				04/15/22 08:43	04/15/22 15:18	1
o-Terphenyl	79		70 - 130				04/15/22 08:43	04/15/22 15:18	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.6		5.01		mg/Kg			04/19/22 14:55	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	BFB1	DFBZ1				
		(70-130)	(70-130)				
880-13746-1	South Auger Hole	105	99				
880-13746-2	South Auger Hole	100	97				
880-13746-3	East Auger Hole	102	99				
880-13746-4	East Auger Hole	104	98				
880-13746-5	West Auger Hole	105	98				
880-13746-6	West Auger Hole	106	100				
880-13746-7	Auger Hole 2	103	87				
890-2197-A-5-D MS	Matrix Spike	104	103				
890-2197-A-5-E MSD	Matrix Spike Duplicate	101	102				
LCS 880-23750/1-B	Lab Control Sample	99	101				
LCSD 880-23750/2-B	Lab Control Sample Dup	103	103				
MB 880-23750/5-B	Method Blank	101	92				
Surrogate Legend							
BFB = 4-Bromofluorobenzene (Surr)							
DFBZ = 1,4-Difluorobenzene (Surr)							

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	1CO1	OTPH1				
		(70-130)	(70-130)				
880-13746-1	South Auger Hole	71	73				
880-13746-1 MS	South Auger Hole	67 S1-	69 S1-				
880-13746-1 MSD	South Auger Hole	71	75				
880-13746-2	South Auger Hole	71	77				
880-13746-3	East Auger Hole	71	78				
880-13746-4	East Auger Hole	70	76				
880-13746-5	West Auger Hole	75	82				
880-13746-6	West Auger Hole	73	82				
880-13746-7	Auger Hole 2	72	79				
Surrogate Legend							
1CO = 1-Chlorooctane							
OTPH = o-Terphenyl							

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	1CO2	OTPH2				
		(70-130)	(70-130)				
LCS 880-23575/2-A	Lab Control Sample	113	132 S1+				
LCSD 880-23575/3-A	Lab Control Sample Dup	100	118				
MB 880-23575/1-A	Method Blank	80	96				
Surrogate Legend							
1CO = 1-Chlorooctane							
OTPH = o-Terphenyl							

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23750/5-B

Matrix: Solid

Analysis Batch: 23819

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23750

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 11:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 11:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 11:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/19/22 17:00	04/20/22 11:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/19/22 17:00	04/20/22 11:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/19/22 17:00	04/20/22 11:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	04/19/22 17:00	04/20/22 11:37	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/19/22 17:00	04/20/22 11:37	1

Lab Sample ID: LCS 880-23750/1-B

Matrix: Solid

Analysis Batch: 23819

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23750

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1169		mg/Kg		117	70 - 130
Toluene	0.100	0.1265		mg/Kg		127	70 - 130
Ethylbenzene	0.100	0.1142		mg/Kg		114	70 - 130
m-Xylene & p-Xylene	0.200	0.2390		mg/Kg		119	70 - 130
o-Xylene	0.100	0.1126		mg/Kg		113	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: LCSD 880-23750/2-B

Matrix: Solid

Analysis Batch: 23819

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23750

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1144		mg/Kg		114	70 - 130	2	35
Toluene	0.100	0.1246		mg/Kg		125	70 - 130	2	35
Ethylbenzene	0.100	0.1118		mg/Kg		112	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2343		mg/Kg		117	70 - 130	2	35
o-Xylene	0.100	0.1111		mg/Kg		111	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 890-2197-A-5-D MS

Matrix: Solid

Analysis Batch: 23819

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 23750

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.100	0.1146		mg/Kg		114	70 - 130
Toluene	<0.00202	U	0.100	0.1225		mg/Kg		122	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

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

Lab Sample ID: 890-2197-A-5-D MS

Matrix: Solid

Analysis Batch: 23819

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 23750

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.100	0.1095		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.201	0.2298		mg/Kg		114	70 - 130
o-Xylene	<0.00202	U	0.100	0.1089		mg/Kg		108	70 - 130
Surrogate	%Recovery	MS Qualifier	MS Limits						
4-Bromofluorobenzene (Surr)	104		70 - 130						
1,4-Difluorobenzene (Surr)	103		70 - 130						

Lab Sample ID: 890-2197-A-5-E MSD

Matrix: Solid

Analysis Batch: 23819

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 23750

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.1280		mg/Kg		129	70 - 130	11	35
Toluene	<0.00202	U	0.0996	0.1162		mg/Kg		117	70 - 130	5	35
Ethylbenzene	<0.00202	U	0.0996	0.1045		mg/Kg		105	70 - 130	5	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.2200		mg/Kg		110	70 - 130	4	35
o-Xylene	<0.00202	U	0.0996	0.1046		mg/Kg		105	70 - 130	4	35
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
4-Bromofluorobenzene (Surr)	101		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								

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

Lab Sample ID: MB 880-23575/1-A

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23575

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/15/22 08:43	04/15/22 10:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/15/22 08:43	04/15/22 10:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/15/22 08:43	04/15/22 10:24	1
Surrogate	%Recovery	MB Qualifier	MB Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130				04/15/22 08:43	04/15/22 10:24	1
o-Terphenyl	96		70 - 130				04/15/22 08:43	04/15/22 10:24	1

Lab Sample ID: LCS 880-23575/2-A

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23575

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	977.3		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1032		mg/Kg		103	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

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

Lab Sample ID: LCS 880-23575/2-A

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23575

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	132	S1+	70 - 130

Lab Sample ID: LCSD 880-23575/3-A

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23575

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1072		mg/Kg		107	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	1000	910.6		mg/Kg		91	70 - 130	13	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	118		70 - 130

Lab Sample ID: 880-13746-1 MS

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: South Auger Hole

Prep Type: Total/NA

Prep Batch: 23575

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	1000	694.8	F1	mg/Kg		67	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1000	596.9	F1	mg/Kg		58	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	67	S1-	70 - 130
o-Terphenyl	69	S1-	70 - 130

Lab Sample ID: 880-13746-1 MSD

Matrix: Solid

Analysis Batch: 23584

Client Sample ID: South Auger Hole

Prep Type: Total/NA

Prep Batch: 23575

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	998	734.2		mg/Kg		72	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	998	657.3	F1	mg/Kg		64	70 - 130	10	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	71		70 - 130
o-Terphenyl	75		70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-23643/1-A

Matrix: Solid

Analysis Batch: 23776

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/19/22 13:20	1

Lab Sample ID: LCS 880-23643/2-A

Matrix: Solid

Analysis Batch: 23776

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	228.6		mg/Kg		91	90 - 110

Lab Sample ID: LCSD 880-23643/3-A

Matrix: Solid

Analysis Batch: 23776

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	233.3		mg/Kg		93	90 - 110	2	20

Lab Sample ID: 880-13750-A-2-E MS

Matrix: Solid

Analysis Batch: 23776

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	99.5		250	350.4		mg/Kg		100	90 - 110

Lab Sample ID: 880-13750-A-2-F MSD

Matrix: Solid

Analysis Batch: 23776

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	99.5		250	332.0		mg/Kg		93	90 - 110	5	20

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

GC VOA

Prep Batch: 23750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13746-1	South Auger Hole	Total/NA	Solid	5035	
880-13746-2	South Auger Hole	Total/NA	Solid	5035	
880-13746-3	East Auger Hole	Total/NA	Solid	5035	
880-13746-4	East Auger Hole	Total/NA	Solid	5035	
880-13746-5	West Auger Hole	Total/NA	Solid	5035	
880-13746-6	West Auger Hole	Total/NA	Solid	5035	
880-13746-7	Auger Hole 2	Total/NA	Solid	5035	
MB 880-23750/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-23750/1-B	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23750/2-B	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2197-A-5-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2197-A-5-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 23819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13746-1	South Auger Hole	Total/NA	Solid	8021B	23750
880-13746-2	South Auger Hole	Total/NA	Solid	8021B	23750
880-13746-3	East Auger Hole	Total/NA	Solid	8021B	23750
880-13746-4	East Auger Hole	Total/NA	Solid	8021B	23750
880-13746-5	West Auger Hole	Total/NA	Solid	8021B	23750
880-13746-6	West Auger Hole	Total/NA	Solid	8021B	23750
880-13746-7	Auger Hole 2	Total/NA	Solid	8021B	23750
MB 880-23750/5-B	Method Blank	Total/NA	Solid	8021B	23750
LCS 880-23750/1-B	Lab Control Sample	Total/NA	Solid	8021B	23750
LCSD 880-23750/2-B	Lab Control Sample Dup	Total/NA	Solid	8021B	23750
890-2197-A-5-D MS	Matrix Spike	Total/NA	Solid	8021B	23750
890-2197-A-5-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23750

Analysis Batch: 23933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13746-1	South Auger Hole	Total/NA	Solid	Total BTEX	
880-13746-2	South Auger Hole	Total/NA	Solid	Total BTEX	
880-13746-3	East Auger Hole	Total/NA	Solid	Total BTEX	
880-13746-4	East Auger Hole	Total/NA	Solid	Total BTEX	
880-13746-5	West Auger Hole	Total/NA	Solid	Total BTEX	
880-13746-6	West Auger Hole	Total/NA	Solid	Total BTEX	
880-13746-7	Auger Hole 2	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 23575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13746-1	South Auger Hole	Total/NA	Solid	8015NM Prep	
880-13746-2	South Auger Hole	Total/NA	Solid	8015NM Prep	
880-13746-3	East Auger Hole	Total/NA	Solid	8015NM Prep	
880-13746-4	East Auger Hole	Total/NA	Solid	8015NM Prep	
880-13746-5	West Auger Hole	Total/NA	Solid	8015NM Prep	
880-13746-6	West Auger Hole	Total/NA	Solid	8015NM Prep	
880-13746-7	Auger Hole 2	Total/NA	Solid	8015NM Prep	
MB 880-23575/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23575/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

GC Semi VOA (Continued)

Prep Batch: 23575 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-23575/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13746-1 MS	South Auger Hole	Total/NA	Solid	8015NM Prep	
880-13746-1 MSD	South Auger Hole	Total/NA	Solid	8015NM Prep	

Analysis Batch: 23584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13746-1	South Auger Hole	Total/NA	Solid	8015B NM	23575
880-13746-2	South Auger Hole	Total/NA	Solid	8015B NM	23575
880-13746-3	East Auger Hole	Total/NA	Solid	8015B NM	23575
880-13746-4	East Auger Hole	Total/NA	Solid	8015B NM	23575
880-13746-5	West Auger Hole	Total/NA	Solid	8015B NM	23575
880-13746-6	West Auger Hole	Total/NA	Solid	8015B NM	23575
880-13746-7	Auger Hole 2	Total/NA	Solid	8015B NM	23575
MB 880-23575/1-A	Method Blank	Total/NA	Solid	8015B NM	23575
LCS 880-23575/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23575
LCSD 880-23575/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23575
880-13746-1 MS	South Auger Hole	Total/NA	Solid	8015B NM	23575
880-13746-1 MSD	South Auger Hole	Total/NA	Solid	8015B NM	23575

Analysis Batch: 23657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13746-1	South Auger Hole	Total/NA	Solid	8015 NM	
880-13746-2	South Auger Hole	Total/NA	Solid	8015 NM	
880-13746-3	East Auger Hole	Total/NA	Solid	8015 NM	
880-13746-4	East Auger Hole	Total/NA	Solid	8015 NM	
880-13746-5	West Auger Hole	Total/NA	Solid	8015 NM	
880-13746-6	West Auger Hole	Total/NA	Solid	8015 NM	
880-13746-7	Auger Hole 2	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 23643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13746-1	South Auger Hole	Soluble	Solid	DI Leach	
880-13746-2	South Auger Hole	Soluble	Solid	DI Leach	
880-13746-3	East Auger Hole	Soluble	Solid	DI Leach	
880-13746-4	East Auger Hole	Soluble	Solid	DI Leach	
880-13746-5	West Auger Hole	Soluble	Solid	DI Leach	
880-13746-6	West Auger Hole	Soluble	Solid	DI Leach	
880-13746-7	Auger Hole 2	Soluble	Solid	DI Leach	
MB 880-23643/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-23643/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-23643/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-13750-A-2-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-13750-A-2-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 23776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13746-1	South Auger Hole	Soluble	Solid	300.0	23643
880-13746-2	South Auger Hole	Soluble	Solid	300.0	23643
880-13746-3	East Auger Hole	Soluble	Solid	300.0	23643

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

HPLC/IC (Continued)

Analysis Batch: 23776 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13746-4	East Auger Hole	Soluble	Solid	300.0	23643
880-13746-5	West Auger Hole	Soluble	Solid	300.0	23643
880-13746-6	West Auger Hole	Soluble	Solid	300.0	23643
880-13746-7	Auger Hole 2	Soluble	Solid	300.0	23643
MB 880-23643/1-A	Method Blank	Soluble	Solid	300.0	23643
LCS 880-23643/2-A	Lab Control Sample	Soluble	Solid	300.0	23643
LCSD 880-23643/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	23643
880-13750-A-2-E MS	Matrix Spike	Soluble	Solid	300.0	23643
880-13750-A-2-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	23643

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Client Sample ID: South Auger Hole

Lab Sample ID: 880-13746-1

Date Collected: 04/11/22 12:00

Matrix: Solid

Date Received: 04/14/22 16:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	23750	04/19/22 17:00	MR	XEN MID
Total/NA	Analysis	8021B		1			23819	04/20/22 16:46	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23933	04/21/22 11:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23657	04/15/22 15:35	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23575	04/15/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23584	04/15/22 11:27	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	23643	04/15/22 11:50	SC	XEN MID
Soluble	Analysis	300.0		1			23776	04/19/22 14:04	SC	XEN MID

Client Sample ID: South Auger Hole

Lab Sample ID: 880-13746-2

Date Collected: 04/11/22 12:02

Matrix: Solid

Date Received: 04/14/22 16:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	23750	04/19/22 17:00	MR	XEN MID
Total/NA	Analysis	8021B		1			23819	04/20/22 17:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23933	04/21/22 11:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23657	04/15/22 15:35	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	23575	04/15/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23584	04/15/22 13:33	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	23643	04/15/22 11:50	SC	XEN MID
Soluble	Analysis	300.0		1			23776	04/19/22 14:11	SC	XEN MID

Client Sample ID: East Auger Hole

Lab Sample ID: 880-13746-3

Date Collected: 04/11/22 12:04

Matrix: Solid

Date Received: 04/14/22 16:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	23750	04/19/22 17:00	MR	XEN MID
Total/NA	Analysis	8021B		1			23819	04/20/22 17:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23933	04/21/22 11:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23657	04/15/22 15:35	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23575	04/15/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23584	04/15/22 13:54	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	23643	04/15/22 11:50	SC	XEN MID
Soluble	Analysis	300.0		1			23776	04/19/22 14:17	SC	XEN MID

Client Sample ID: East Auger Hole

Lab Sample ID: 880-13746-4

Date Collected: 04/11/22 12:06

Matrix: Solid

Date Received: 04/14/22 16:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	23750	04/19/22 17:00	MR	XEN MID
Total/NA	Analysis	8021B		1			23819	04/20/22 18:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23933	04/21/22 11:09	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Client Sample ID: East Auger Hole

Lab Sample ID: 880-13746-4

Date Collected: 04/11/22 12:06

Matrix: Solid

Date Received: 04/14/22 16:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			23657	04/15/22 15:35	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23575	04/15/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23584	04/15/22 14:15	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	23643	04/15/22 11:50	SC	XEN MID
Soluble	Analysis	300.0		1			23776	04/19/22 14:36	SC	XEN MID

Client Sample ID: West Auger Hole

Lab Sample ID: 880-13746-5

Date Collected: 04/11/22 12:08

Matrix: Solid

Date Received: 04/14/22 16:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	23750	04/19/22 17:00	MR	XEN MID
Total/NA	Analysis	8021B		1			23819	04/20/22 18:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23933	04/21/22 11:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23657	04/15/22 15:35	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23575	04/15/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23584	04/15/22 14:36	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	23643	04/15/22 11:50	SC	XEN MID
Soluble	Analysis	300.0		1			23776	04/19/22 14:42	SC	XEN MID

Client Sample ID: West Auger Hole

Lab Sample ID: 880-13746-6

Date Collected: 04/11/22 12:10

Matrix: Solid

Date Received: 04/14/22 16:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	23750	04/19/22 17:00	MR	XEN MID
Total/NA	Analysis	8021B		1			23819	04/20/22 18:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23933	04/21/22 11:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23657	04/15/22 15:35	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23575	04/15/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23584	04/15/22 14:57	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	23643	04/15/22 11:50	SC	XEN MID
Soluble	Analysis	300.0		1			23776	04/19/22 14:48	SC	XEN MID

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-13746-7

Date Collected: 04/11/22 12:12

Matrix: Solid

Date Received: 04/14/22 16:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	23750	04/19/22 17:00	MR	XEN MID
Total/NA	Analysis	8021B		1			23819	04/20/22 19:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23933	04/21/22 11:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23657	04/15/22 15:35	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	23575	04/15/22 08:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			23584	04/15/22 15:18	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Client Sample ID: Auger Hole 2
Date Collected: 04/11/22 12:12
Date Received: 04/14/22 16:29

Lab Sample ID: 880-13746-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	23643	04/15/22 11:50	SC	XEN MID
Soluble	Analysis	300.0		1			23776	04/19/22 14:55	SC	XEN MID

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

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

Protocol References:

- ASTM = ASTM International
- MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Benson Shugart Waterflood Unit #011

Job ID: 880-13746-1
SDG: 15304

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-13746-1	South Auger Hole	Solid	04/11/22 12:00	04/14/22 16:29	0 - 6"
880-13746-2	South Auger Hole	Solid	04/11/22 12:02	04/14/22 16:29	42 - 48"
880-13746-3	East Auger Hole	Solid	04/11/22 12:04	04/14/22 16:29	0 - 6"
880-13746-4	East Auger Hole	Solid	04/11/22 12:06	04/14/22 16:29	42 - 48"
880-13746-5	West Auger Hole	Solid	04/11/22 12:08	04/14/22 16:29	0 - 6"
880-13746-6	West Auger Hole	Solid	04/11/22 12:10	04/14/22 16:29	42 - 48"
880-13746-7	Auger Hole 2	Solid	04/11/22 12:12	04/14/22 16:29	66 - 72"

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334

Midland TX (432)704-5440 EL Paso TX (915)585-3443 Lubbock TX (806)794-1296

Hobbs NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-620-2000)

Work Order No: 15140

www.xenco.com Page of

Project Manager	Brandon Wilson	Bill to (if different)	
Company Name	Etech Environmental	Company Name	
Address	13000 W CR 100	Address	
City, State ZIP	Odessa, Texas 79765	City, State ZIP	
Phone	432-563-2200	Email.	brandon@etechenv.com, blake@etechenv.com

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

[illegible]

Total 200.7 / 6010 200.8 / 6020:



8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by (Signature)		Received by (Signature)		Date/Time	Relinquished by (Signature)		Received by (Signature)		Date/Time
1				4/14/22	2				
3				10-29	4				
5					6				

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-13746-1

SDG Number: 15304

Login Number: 13746

List Number: 1

Creator: Teel, Brianna

List Source: Eurofins Midland

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

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

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

CONDITIONS

Action 134966

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 134966
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	Submit a complete report through the OCD Permitting website by 03/10/2023.	12/8/2022

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

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

QUESTIONS

Action 333913

QUESTIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:
	4323
	Action Number:
	333913
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nMCS0124834063
Incident Name	NMCS0124834063 BENSON SHUGART WATERFLOOD UNIT #011 @ 30-015-20528
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-20528] BENSON SHUGART WATERFLOOD UNIT #011

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BENSON SHUGART WATERFLOOD UNIT #011
Date Release Discovered	06/04/2001
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: Equipment Failure Producing Well Crude Oil Released: 80 BBL Recovered: 60 BBL Lost: 20 BBL.
Produced Water Released (bbls) Details	Cause: Produced Water Released: 200 BBL Recovered: 120 BBL Lost: 80 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 2

Action 333913

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:	4323
	Action Number:	333913
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
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: Amy Barnhill Title: Waste & Water Specialist Email: ABarnhill@chevron.com Date: 04/16/2024
--	---

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 3

Action 333913

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 333913
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Site Characterization**

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

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
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 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1000 (ft.) and ½ (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 500 and 1000 (ft.)
Any other fresh water well or spring	Between 1000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 500 and 1000 (ft.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between 1000 (ft.) and ½ (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 500 and 1000 (ft.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

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

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

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

Chloride (EPA 300.0 or SM4500 Cl B)	294
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	702
GRO+DRO (EPA SW-846 Method 8015M)	702
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

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

On what estimated date will the remediation commence	11/21/2024
On what date will (or did) the final sampling or liner inspection occur	11/21/2024
On what date will (or was) the remediation complete(d)	11/21/2024
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	38.4
What is the estimated volume (in cubic yards) that will be remediated	6

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

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

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 4

Action 333913

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:	4323
	Action Number:	333913
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Remediation Plan (continued)**

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.

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(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	LEA LAND LANDFILL [fEEM0112342028]
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.

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Amy Barnhill Title: Waste & Water Specialist Email: ABarnhill@chevron.com Date: 04/16/2024
--	---

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.

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

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

QUESTIONS, Page 5

Action 333913

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:
	4323
	Action Number:
	333913
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 6

Action 333913

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:	4323
	Action Number:	333913
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	306095
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/21/2023
What was the (estimated) number of samples that were to be gathered	5
What was the sampling surface area in square feet	40

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	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	38.4
What was the total volume (cubic yards) remediated	6
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	0
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	Remediation activities completed to Site Closure Criteria.

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Amy Barnhill Title: Waste & Water Specialist Email: ABarnhill@chevron.com Date: 04/16/2024
--	---

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

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

QUESTIONS, Page 7

Action 333913

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 333913
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 333913

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:
	4323
	Action Number: 333913
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
bhall	Closure approved. A reclamation report will need to be submitted when the area is no longer reasonably needed. A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	4/19/2024
bhall	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	4/19/2024
bhall	Subsequent to the approval of a reclamation report, a revegetation report will need to be submitted. A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	4/19/2024
bhall	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	4/19/2024
bhall	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	4/19/2024