Incident ID: nAPP2227880032
REVISED REMEDIATION AND CLOSURE REPORT
Salado Draw Corridor Line 3rd Spill
Crude Oil and Produced Water Release
Lea County, New Mexico

Latitude: 32.03553
Longitude: -103.63817

LAI Project No. 23-0102-04

May 2, 2024

Prepared for:
Chevron USA Inc.
6301 Deauville Blvd.
Midland, Texas 79706

Prepared by:
Larson & Associates, Inc.
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Midland, Texas 79701

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Certified Professional Geologist #10490

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Staff Geologist

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1.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this remediation and closure report on behalf of Chevron USA Inc. (Chevron) for submittal to the New Mexico Oil Conservation Division (NMOCD) District I for a crude oil and produced water release (3rd spill) at the Salado Draw Corridor (Site) located in Unit A (NE/4 of NE/4), Section 23, Township 26 South, Range 32 East in Lea County, New Mexico. The geodetic position is North 32.03553 and West -103.63817. Figure 1 presents a topographic map.

1.1 Background

The release was discovered on September 19, 2022, and was the result lay flat waterline connection failure. Chevron reported that about 7.26 barrels (bbls) of produced water and 0.074 bbls of crude oil were released, with about 4.5 bbls of produced water and 0.074 bbls of crude oil being recovered. The release occurred in the pasture and covered an area of about 1,291 square feet. The initial C-141 was received by the NMOCD on October 6, 2022. Figure 2 presents an aerial map with the spill area. Appendix A presents the initial C-141 and spill calculation.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,162 feet above mean sea level (MSL).
- The surface topography gradually decreases to the southwest.
- There are no surface water features within 1,000 feet of the Site.
- USGS karst occurrence potential data designates the area as “medium” risk.
- The soils are designated as Pyote and Maljamar fine sands, where Pyote setting consists of 0 to 30 inches of find sand, underlain by 30 to 60 inches of fine sandy loam; and the Maljamar setting consists of 0 to 24 inches of fine sand, underlain by 24 to 50 inches of sandy clay loam, and 50 to 60 inches of cemented material (caliche).
- Surface geology is described as Holocene to middle Pleistocene eolian and piedmont deposits consisting of alternating layers of eolian and piedmont-slope deposits.
- Groundwater occurs at a depth greater than 101.5 feet below ground surface (bgs), based on two dry groundwater bores, SB-1 and BH-1, located 0.68 miles southeast and 1.26 miles west of the Site, respectfully, and gauged for depth to groundwater 72 hours after completion.

Figure 3 presents an aerial map with the site location and groundwater borehole locations. Appendix B presents the groundwater borehole logs. Appendix C presents the karst potential map.

1.3 Remediation Levels

The following remediation standards are based on closure criteria for groundwater greater than 100 feet bgs and soils impacted by a release, as presented in Table 1 of 19.15.29 NMAC:

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 2,500 mg/Kg
- Chloride 20,000 mg/Kg

Furthermore, 19.15.29.13 NMAC (Restoration, Reclamation and Re-Vegetation) requires the operator to restore the impacted surface area to that which existed prior to the release, or its final land use.

2.0 DELINEATION

The delineation results were documented in a report titled "*Delineation Report and Remediation Plan, Salado Draw Corridor Line 3rd Spill, Lea County, New Mexico, June 5, 2023".* The report recommended the following remedial actions:

- Excavate soil to 1.5 feet bgs from an area measuring approximately 121 square feet encompassing S-4.
- Excavate soil to 4.1 feet bgs from an area measuring approximately 253 square feet encompassing S-1.
- Collect five (5) point composite bottom and sidewall confirmation soil samples every 200 square feet and analyze for BTEX, TPH and chloride to confirm concentrations below the NMOCD closure criteria in Table 1 (19.15.29 NMAC) for groundwater occurring a depth greater than 100 feet bgs.
- Backfill excavation with clean topsoil within the pipeline right of way (ROW) assuming achievement of NMOCD remediation levels.
- Prepare report with photographs for submittal to NMOCD District I.

The remediation plan was approved by the NMOCD on September 19, 2023. Figure 4 presents an aerial map with delineation sample locations and proposed excavation areas. Appendix D presents NMCOD communications.

3.0 REMEDIATION

On October 4, 2023, R&M Trucking and Backhoe Service, LLC (R&M) under supervision for LAI personnel, used mechanical excavation methods to excavate approximately 45.1 cubic yards of impacted soil from an area of about 374 square feet. The excavated soil was disposed of at the Milestone Environmental disposal facility near Orla, Texas.

LAI personnel collected five (5) confirmation soil samples (C-1 through C-5) from the excavation, including three bottom samples (C-1, C-3, and C-4) and two sidewall samples (C-2 and C-5). The samples were delivered under chain-of-custody and preservation to Eurofins-Xenco (Xenco) Laboratories in Midland, Texas, and were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA SW-846 Method 8021B, total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28), and oil range organics (>C28-C35) by EPA SW-846 Method 8015M, and chloride by EPA Method 300. Xenco reported benzene, BTEX, TPH, and chloride were below NMOCD closure criteria in all samples.

Laboratory analysis demonstrates that benzene, BTEX, TPH, and chloride were remediated below the NMOCD closure standards listed in Table 1 of 19.15.29 NMAC, in all samples collected from the excavation. Table 2 presents the confirmation sample analytical summary. Figure 5 presents an aerial map with the excavation areas and confirmation sample locations. Appendix E presents the laboratory reports.

4.0 RECLAMATION

On November 1, 2023, LAI personnel collected one (1) composite sample (BF-1) of backfill material from the Battle Axe Headquarters borrow pit in Lea County, New Mexico. Xenco analyzed the sample and reported benzene, BTEX, and TPH concentrations below the analytical method reporting limits (RL) and NMOCD closure criteria. The chloride concentration in BF-1 was 47.3 mg/Kg, and below the NMOCD requirements prescribed in 19.15.29.13D(1) NMAC. Table 2 presents the backfill material analytical data summary.

On November 14, 2023, R&M backfilled the excavation with non-waste containing backfill material from the Battle Axe Headquarters borrow pit. Additional topsoil was used to recontour offsite areas to resemble previous surface conditions. LAI personnel seeded the remediation area with BLM Mix #2. Backfill notification was provided to the NMOCD on November 16, 2023. Appendix D presents NMOCD communications. Appendix E presents the laboratory reports. Appendix F presents photographic documentation.

5.0 CLOSURE REQUEST

On February 26, 2024, Chevron received notification from the NMOCD regarding the rejected closure requesting and stated "*Remediation closure denied. Per 19.15.29.12 (D)1(a) NMAC, "The responsible part must verbally notify the appropriate division district office two business days prior to conducting final sampling." Before collecting final confirmation samples, submit a C-141N via epermitting at least two business days prior to collecting samples or they will not be approved for closure. Resubmit closure report to OCD by April 26, 2024."*

On March 4, 2024, LAI on behalf of Chevron emailed Nelson Velez with the NMOCD to obtain clarity regarding the sample notification. The email was subsequently forwarded to Shelly Wells and Mike Bratcher for clarification. LAI and Chevron attempted to establish a meeting with the NMOCD regarding this matter. On April 12, 2024, LAI submitted a follow up email to Ms. Wells regarding the meeting time. Ms. Wells responded to the email stating "You may resubmit the remediation closure reports via the portal however going forward, a C-141N needs to be submitted via permitting portal two business days prior to collecting confirmation samples for each day that you sample. Any updates to submitted C-141N sample notifications should be sent via email to OCD.Enviro@emnrd.nm.gov". Appendix D presents the NMOCD communications.

Chevron requests closure for nAPP2227880032.

Tables

Table 1
Soil Sample Analytical Data Summary
Salado Draw 13 Corridor Line 3rd Spill
Lea County, New Mexico
32° 02' 08.03" N, 103° 38' 17.63" W

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Delineation Limit:				**10**	**50**				**100/2,500**	**600/20,000**
S-1	0 - 1	5/8/2023	In-Situ	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	435
	1 - 2	5/8/2023	In-Situ	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	189
	2 - 3	5/8/2023	In-Situ	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	**613**
	3 - 4	5/8/2023	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	456
S-2	0 - 1	5/8/2023	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	151
	1 - 2	5/8/2023	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	226
	2 - 3	5/8/2023	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	279
S-3	0 - 1	5/8/2023	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	587
	1 - 2	5/8/2023	In-Situ	<0.00198	<0.00397	<49.8	<49.8	<49.8	<49.8	276
	2 - 3	5/8/2023	In-Situ	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	359
S-4	0 - 1	5/8/2023	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	**617**
	1 - 2	5/8/2023	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	320
	2 - 3	5/8/2023	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	187
	3 - 4	5/8/2023	In-Situ	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	259
	4 - 5	5/8/2023	In-Situ	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	219
S-5	0 - 0.5	5/8/2023	In-Situ	<0.00198	<0.00396	<50.0	70.7	<50.0	70.7	244
	0.5 - 1	5/8/2023	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	102
S-6	0 - 0.5	5/8/2023	In-Situ	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	70.5
	0.5 - 1	5/8/2023	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	66.4
S-7	0 - 0.5	5/8/2023	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	60.7
	0.5 - 1	5/8/2023	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	62.2

Table 1
Soil Sample Analytical Data Summary
Salado Draw 13 Corridor Line 3rd Spill
Lea County, New Mexico
32° 02' 08.03" N, 103° 38' 17.63" W

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Delineation Limit:				**10**	**50**				**100/2,500**	**600/20,000**
S-8	0 - 0.5	5/8/2023	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	91.2
	0.5 - 1	5/8/2023	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	63.1

Notes:

Analysis performed by Eurofins-Xenco Laboratories in Midland, Texas by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and EPA Method 300 (chloride).

mg/Kg: milligrams per kilogram; equivalent to parts per million (ppm).

<: indicates that parameter concentration is less than the analytical method reporting limit.

Depth reported in feet below ground surface (bgs)

Bold and highlighted indicates that parameter is above NMOCD closure criteria.

Table 2
Confirmation Soil Sample Analytical Data Summary
Salado Draw 13 Corridor Line 3rd Spill
Lea County, New Mexico
32° 02' 08.03" N, 103° 38' 17.63" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Closure Criteria:					***10***	***50***				***100/2,500***	***600/20,000***
C-1	Bottom	1.5	10/04/2023	In-Situ	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	366
C-2	Sidewall	0-1.5	10/04/2023	In-Situ	<0.00200	<0.00399	<50.3	<50.3	<50.3	<50.3	300
C-3	Bottom	4.1	10/04/2023	In-Situ	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	195
C-4	Bottom	4.1	10/04/2023	In-Situ	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	441
C-5	Sidewall	0-4.1	10/04/2023	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	164
Backfill Samples											
BF-1	--	--	11/01/2023	In-situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	47.3

Notes:

Analysis performed by Eurofins-Xenco Laboratories (Xenco), in Midland, Texas, by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and EPA Method 300 (chloride).

mg/Kg: milligrams per kilogram; equivalent to parts per million (ppm)

<: indicates that parameter concentration is below method analytical reporting limit

Depth reported in feet below ground surface (bgs)

Bold and highlighted indicates parameter concentration is above NMOCD closure criteria

Figures

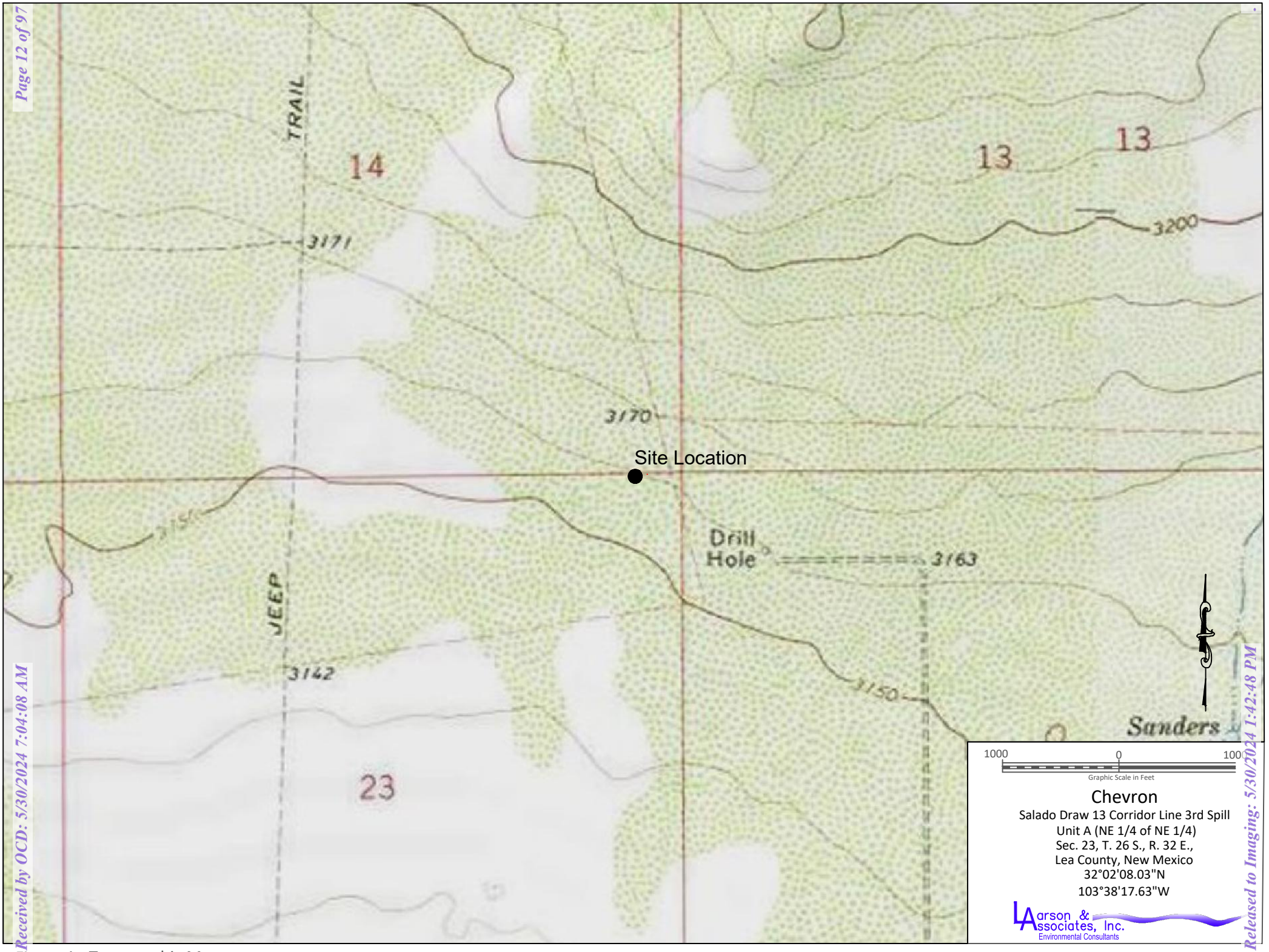

Figure 1 - Topographic Map

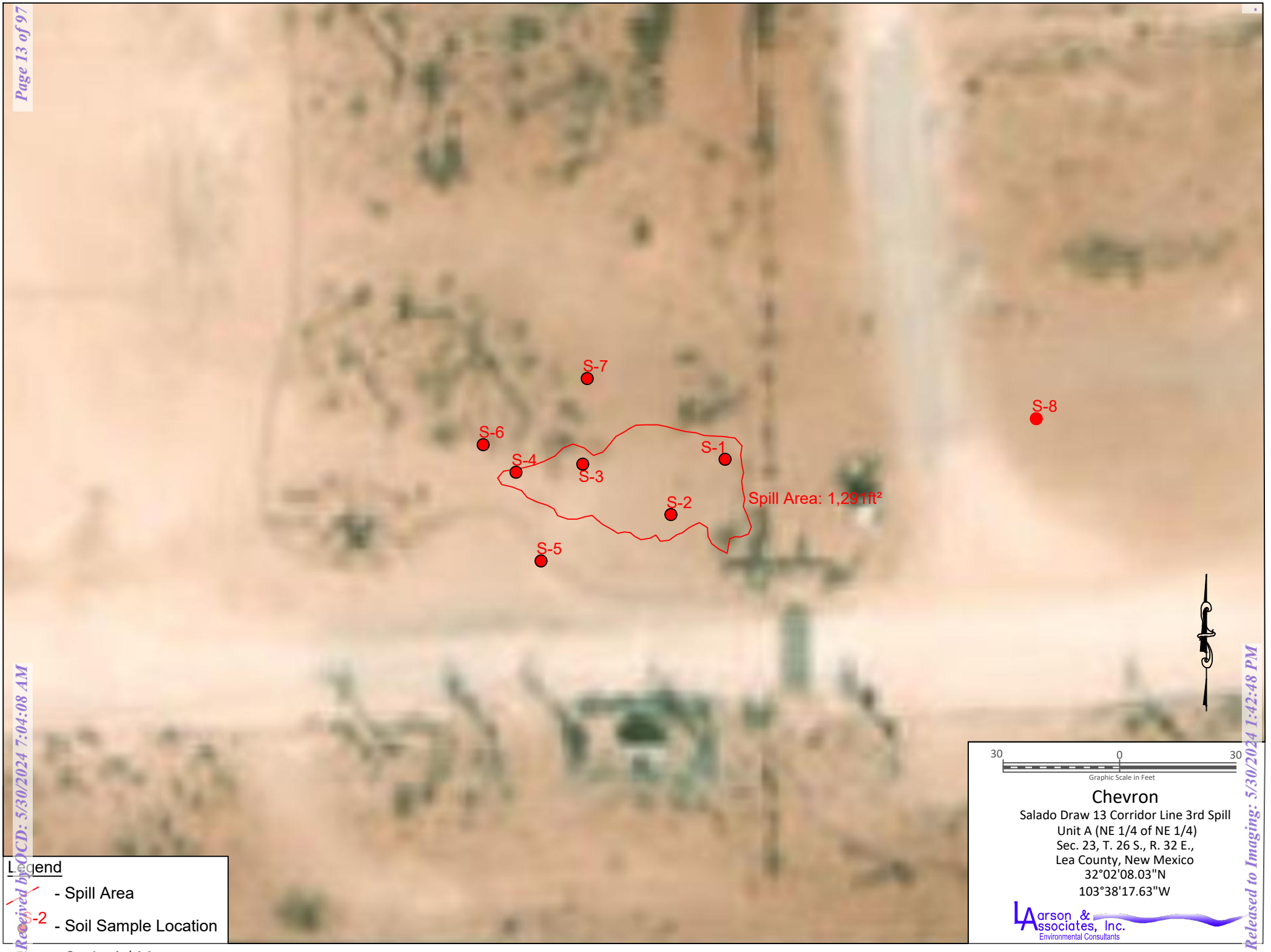

Figure 2 - Aerial Map

Figure 3 - Aerial Map Showing Boring Locations

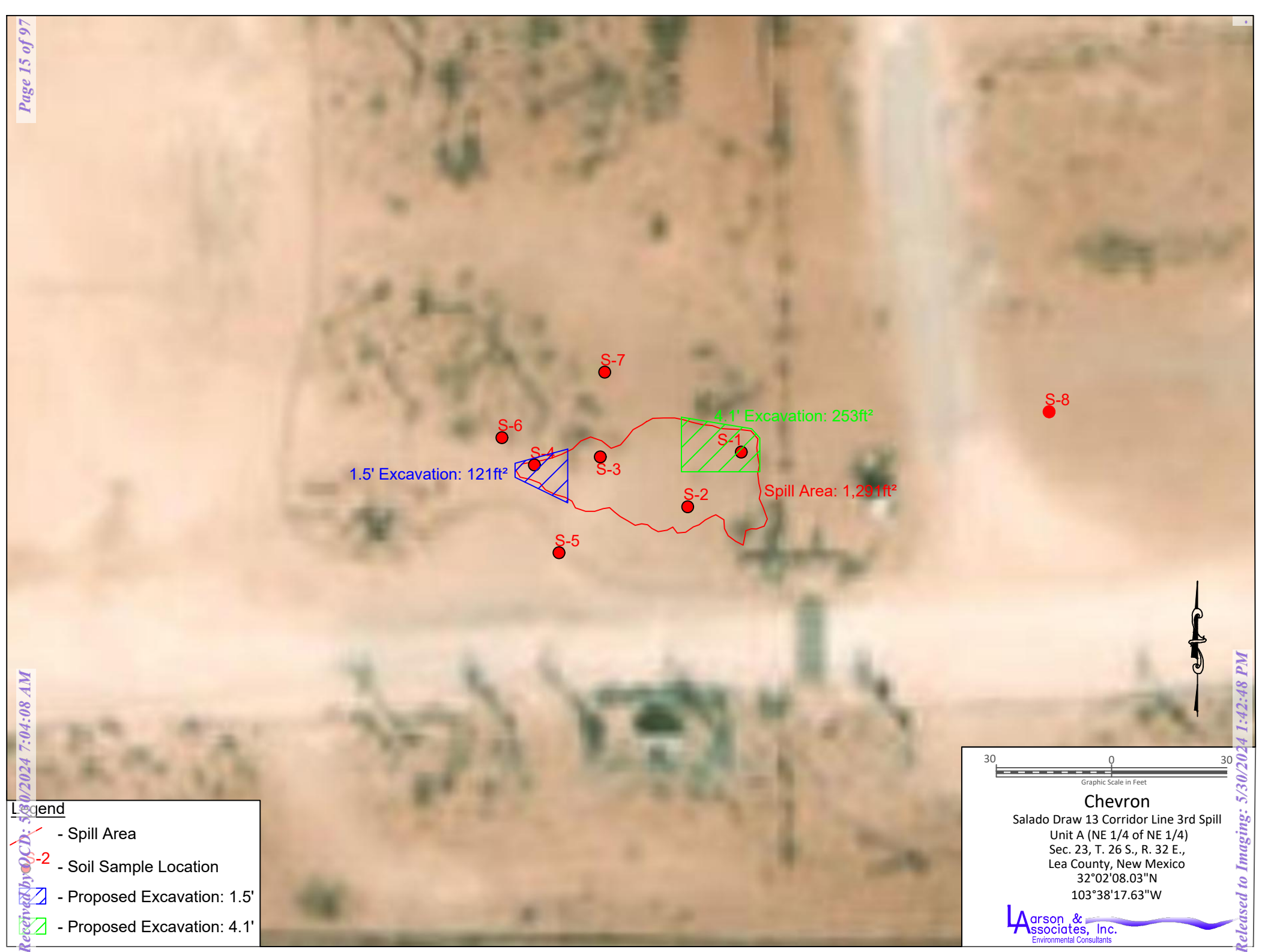

Figure 4 - Aerial Map Showing Proposed Excavation Areas

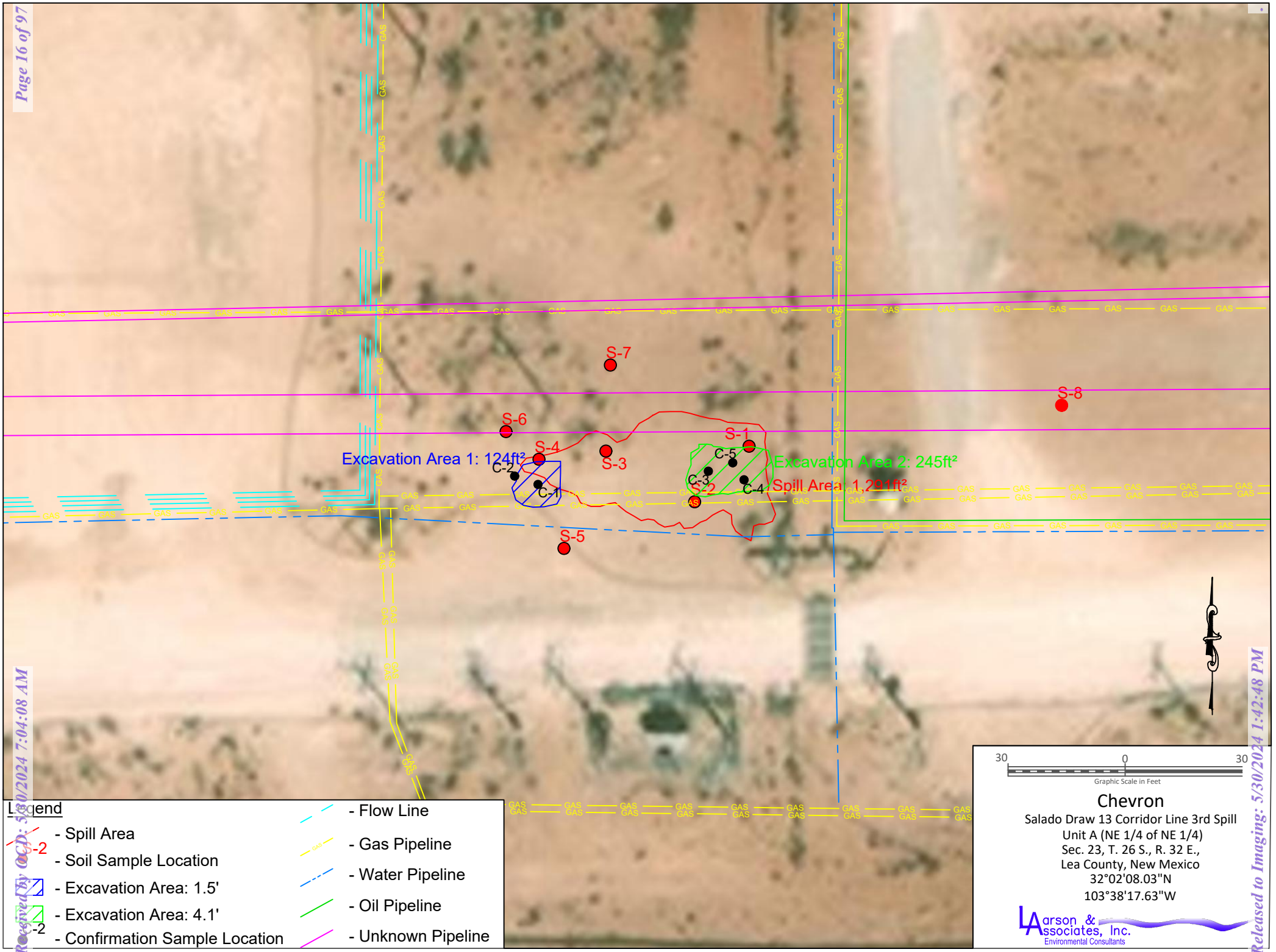

Figure 5 - Aerial Map Showing Excavation Areas

Appendix A

Initial 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	nAPP2227880032
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 32.0354749 Longitude -103.63810483
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Salado Draw 13 SWD	Site Type: Produced Water
Date Release Discovered: 9-19-22	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
P	23	26S	32E	Lea

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls).074	Volume Recovered (bbls).074
☒ Produced Water	Volume Released (bbls) 7.26	Volume Recovered (bbls) 4.5
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release: Lay flat water connection failure		

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2227880032
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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: Amy Barnhill Date: 10-5-22

email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: Date:

Incident ID	nAPP2227880032
District RP	
Facility ID	
Application ID	

Spill Calculations:

Area 1
Shape: Rectangle
Secondary Containment?: No
Standing Liquid Dimensions: 9 ft x 9 ft x 4 in
Total Volume: 5.170 bbl
Water Cut: 99 %
Oil Volume:.052 bbl
Penetration Depth: 2 in
Fluid to Soil Volume: .361 bbl
Water Volume: 5.118 bbl

Area 2
Shape:Rectangle
Secondary Containment?: No
Standing Liquid Dimensions: 72 ft x 27 ft x 0 in
Total Volume: 2.164 bbl
Water Cut: 99%
Oil Volume: .022 bbl
Penetration Depth: .500 in
Volume to Soil Volume: 2.164 bbl
Water Volume: 2.142 bbl

Appendix B

Karst Potential Map


Salado Draw 13 Corridor Line
Medium

Appendix C

Groundwater Borehole Logs

BORING RECORD

Start: 12:39
Finish: 14:32

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING PPM X	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING
	0	Caliche, 5YR 8/1, White, Fill	Caliche							SOIL : PPM
	5	Silty Sand, 5YR 5/6, Yellowish Red, Very Fine Grained Quartz, Poorly Sorted,Grain Imbedded with Caliche below 5', White, 5YR 8/1, Quartz Sand, Medium to Coarse Grade	SM							SOIL : PPM
	10									
	15									
	20	Sand, 7.5YR 5/6, Strong Brown, Very Fine Grained Quartz Sand, Rounded, Poorly Sorted Reddish Brown, 5YR 5/4, Yellowish Red, 5YR 5/6, below 20', Dry	SW			2			20	12:47
	25	Thin Caliche Beds Below 25', Indurated, 5YR 7/0, Pink, Moderately Hard								
	30	Sandstone Harder Below 30', Hard at 35'-40', Fine to Very Fine Grained Quartz Sand, Very Well Cemented	Sand Stone							
	35									
	40	Shale (Red Bed), 2.5YR 4/6, Red, Very Fine Grained, Poorly Sorted, Weakly Cemented, Dry				3			40	13:19
	45									
	50	Below 50' Interbedded with Thin Sandstone Beds, Moderately Hard, Dry				4			60	13:39
	55		Shale							
	60									
	65									

PID READING scale: 2 4 6 8 10 12 14 16 18

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
L LABORATORY TEST LOCATION
\+ PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 10/12/2022

BORING NUMBER : BH-1

JOB NUMBER : Chevron/ 20-0107-23
HOLE DIAMETER : 5"
LOCATION : Malestrom 15-1 SWD, 32°02'06.26"N, -103°39'34.71"W
LAI GEOLOGIST : M. Larson
DRILLING CONTRACTOR : Scarborough Drilling
DRILLING METHOD : Air Rotary

BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 12:39 Finish: 14:32 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING PPM X (2 4 6 8 10 12 14 16 18)	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING SOIL : PPM SOIL : PPM
	70	Sandstone, 2.5YR 5/9, Reddish Brown, Very Fine Grained Quartz Sand,Poorly Sorted, Soft to Moderate, Well Cemented	Sand Stone							
	75									
	80	Shale (Red Bed), 2.5YR 4/6 to 5/6, Red to Reddish Brown, Silty, Very Fine Grained Quartz Sand, Dry	Shale			5			80	13:56
	85									
	90									
	95									
	100									
	105		Shale							
	110									
	115	TD: 115' Dry after 72 Hours								
	120									
	125									
	130									

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
L LABORATORY TEST LOCATION
\+ PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

JOB NUMBER : Chevron/ 20-0107-23
HOLE DIAMETER : 5"
LOCATION : Malestrom 15-1 SWD [redacted], 32°02'06.26"N, -103°39'34.71"W
LAI GEOLOGIST : M. Larson
DRILLING CONTRACTOR : Scarborough Drilling
DRILLING METHOD : Air Rotary

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 10/12/2022

BORING NUMBER : BH-1

BORING RECORD

Start: 10:35 MDT
Finish: 15:15

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING PPM X	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING
	0	Silty Sand, 5YR 5/4, Reddish Brown, Very Fine Grained Quartz Sand, Poorly Sorted, Dry	ML			1			5	SOIL : PPM
	5								7	SOIL : PPM
	10	Caliche, 2.5YR 8/3, Pink, Very Fine Grained, Poorly Sorted, Dry	Caliche						10	
	15								15	
	20								20	
	25	Silty Sand, 5YR 5/4, Reddish Brown, Fine Grained Quartz Sand with Caliche Clasts (~10mm), Poorly Sorted	ML			2			25	
	30					3			30	
	35	Caliche, 2.5YR 8/3, Pink, Very Fine Grained, Poorly Sorted with Subangular Clasts (~10mm)	Caliche						35	
	40	Silty Sand, 5YR 6/4, Light Reddish Brown, Very Fine Grained Quartz Sand, Poorly Sorted with Subangular Caliche Clasts (~10mm)	ML			4			39 40	
	45								45	
	50								50	
	55								55	
	60								60	

PID READING scale: 2 4 6 8 10 12 14 16 18

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
LABORATORY TEST LOCATION
PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 04-14-2020
BORING NUMBER : SB-01

JOB NUMBER : Chevron/ 19-0180-01
HOLE DIAMETER : 2"
LOCATION : Salado Draw 24 CTB 32.0250583°, -103.6342389°
LAI GEOLOGIST : E. Chavez
DRILLING CONTRACTOR : Scarborough
DRILLING METHOD : Air Rotary

BORING RECORD

Start: 10:35 MDT
Finish: 15:15

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING PPM X	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING
	65	Silty Sand, 5YR 5/6, Yellowish Red, Very Fine Grained, Poorly Sorted with Subangular Caliche and Black Chert Clasts (~0.5mm)	ML			5			66	SOIL : PPM SOIL : PPM
	70								70	
	75								75	
	80								80	
	85								85	
	90	Silty Sand, 5YR 4/6, Yellowish Red, Fine Grained, Poorly Sorted with Subangular Caliche (~2mm)	ML						90	
	95								95	
	100	TD:101.5' *Dry After 72 Hours*				6			100 101.5	
	105								105	

PID READING scale: 2 4 6 8 10 12 14 16 18

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
L LABORATORY TEST LOCATION
\+ PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

JOB NUMBER : Chevron/ 19-0180-01
HOLE DIAMETER : 2"
LOCATION : Salado Draw 24 CTB 32.0250583°, -103.6342389°
LAI GEOLOGIST : E. Chavez
DRILLING CONTRACTOR : Scarborough
DRILLING METHOD : Air Rotary

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 04-14-2020

BORING NUMBER : SB-01

Appendix D

NMOCD Communications

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

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

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 231076
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation plan is approved as written. Chevron has 60-days (November 20, 2023) to submit its appropriate or final closure report.	9/19/2023

Daniel St. Germain

From: Robert Nelson
Sent: Thursday, November 9, 2023 10:00 AM
To: Hamlet, Robert, EMNRD; Velez, Nelson, EMNRD
Cc: Mark Larson; Amy Barnhill (abarnhill@chevron.com); Daniel St. Germain
Subject: RE: Backfill Notification - Salado Draw 13 Corridor Line 3rd Spill (nAPP2227880032)
Attachments: Figure 4 - Aerial Map Showing Excavations with Pipelines.pdf; Table-2_Confirmation-Sample-Analytical-Summary_SD-13-Corridor-Line-3_20231102.pdf

Robert and Nelson,

A slight modification with the notification submitted on November 6, 2023, as the attachments were incorrect. Please find attached the corrected attachments for the Salado Draw 13 Corridor Line 3rd Spill (nAPP2227880032). This work is currently scheduled for Tuesday November 14th. If you have any questions or comments, please let us know.

Thank you,

Robert Nelson
Project Manager
Office – 432-687-0901
Cell – 432-664-4804
rnelson@laenvironmental.com

From: Daniel St. Germain <dstgermain@laenvironmental.com>
Sent: Monday, November 6, 2023 8:41 AM
To: Hamlet, Robert, EMNRD <robert.hamlet@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Mark Larson <Mark@laenvironmental.com>; Robert Nelson <rnelson@laenvironmental.com>; Amy Barnhill (abarnhill@chevron.com) <abarnhill@chevron.com>
Subject: Backfill Notification - Salado Draw 13 Corridor Line 3rd Spill (nAPP2227880032)

Hello Mr. Hamlet and Mr. Velez,

Larson & Associates, Inc. (LAI), on behalf of Chevron, submits the attached confirmation sample analytical data summary and aerial map with excavation areas and confirmation sample locations to the New Mexico Oil Conservation Division (NMOCD) to provide the required two business days notice prior to backfilling the excavation at the Salado Draw 13 Corridor Line 3rd Spill (nAPP2227880032) in Lea County, New Mexico. Please feel free to contact Amy Barnhill with Chevron at (432) 940-8524 or abarnhill@chevron.com, Mark Larson (432) 556-8656 or mark@laenvironmental.com, Robert Nelson (432) 664-4804 or rnelson@laenvironmental.com, or me with any questions or concerns.

Respectfully,

Daniel St. Germain
Geologist
Office: (432) 687-0901

Cell: (432) 664-5357
dstgermain@laenvironmental.com

From: Wells, Shelly, EMNRD
To: Robert Nelson
Cc: Barnhill, Amy D.; Mark Larson; Velez, Nelson, EMNRD; Bratcher, Michael, EMNRD
Subject: RE: [EXTERNAL] OCD Rejected Closure Reports
Date: Friday, April 12, 2024 10:30:58 AM
Attachments: image001.png
image002.png

You don't often get email from shelly.wells@emnrd.nm.gov. Learn why this is important

Good morning Robert,

You may resubmit the remediation closure reports via the portal however going forward a C-141N needs to be submitted via the permitting portal two business days prior to collecting confirmation samples for each day that you sample. Any updates to submitted C-141N sampling notifications should be sent via email to OCD.Enviro@emnrd.nm.gov

Kind regards,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Robert Nelson <rnelson@laenvironmental.com>
Sent: Friday, April 12, 2024 9:20 AM
To: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Cc: Barnhill, Amy D. <ABarnhill@chevron.com>; Mark Larson <Mark@laenvironmental.com>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: RE: [EXTERNAL] OCD Rejected Closure Reports

Hello Shelly,

I'm following up on the email below (March 5, 2024) regarding a meeting to discuss the OCD rejected closure reports referenced below. Please let us know what timeframe works best with you?

Thank you,

Robert Nelson
Project Manager
Office – 432-687-0901
Cell – 432-664-4804
rnelson@laenvironmental.com

Larson & Associates, Inc.
Environmental Consultants

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Tuesday, March 5, 2024 12:57 PM
To: Robert Nelson <rnelson@laenvironmental.com>
Cc: Barnhill, Amy D. <ABarnhill@chevron.com>; Mark Larson <Mark@laenvironmental.com>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: RE: [EXTERNAL] OCD Rejected Closure Reports

Hi Robert,

We are working on a timeframe for possibly meeting with you next week. Would you please forward copies of the November 6, 2023 (Salado Draw 13 Corridor Line) and October 16, 2023 (Salado Draw CTB 24) emails you refer to in the March 4, 2024 email below?

Kind regards,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Robert Nelson <rnelson@laenvironmental.com>
Sent: Monday, March 4, 2024 3:20 PM
To: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Cc: Barnhill, Amy D. <ABarnhill@chevron.com>; Mark Larson <Mark@laenvironmental.com>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: RE: [EXTERNAL] OCD Rejected Closure Reports

Hello Shelly,

Would you and Mike Bratcher be available for a conference call via Teams this week or next week to discuss this matter? If so, would you please provide us a date and time when you are available.

Thank you,

Robert Nelson
Project Manager

Office – 432-687-0901
Cell – 432-664-4804
rnelson@laenvironmental.com
LArson & Associates, Inc.
Environmental Consultants

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Monday, March 4, 2024 2:49 PM
To: Robert Nelson <rnelson@laenvironmental.com>
Cc: Barnhill, Amy D. <ABarnhill@chevron.com>; Mark Larson <Mark@laenvironmental.com>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: RE: [EXTERNAL] OCD Rejected Closure Reports

Hi Robert,

As I noted in the rejection, a C-141N should be submitted at least two business days prior to recollecting your closure/confirmation samples and no I was not suggesting back dates. Samples should be recollected and included in a closure report resubmittal. Had you attached two business day notice via OCD.Enviro@emnrd.nm.gov that would have sufficed for the requirement in 19.15.29.12(D)1(a) NMAC.

Regards,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Monday, March 4, 2024 1:41 PM
To: Robert Nelson <rnelson@laenvironmental.com>
Cc: Barnhill, Amy D. <ABarnhill@chevron.com>; Mark Larson <Mark@laenvironmental.com>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Subject: Re: [EXTERNAL] OCD Rejected Closure Reports

Good afternoon Robert,

Shelly Wells was assigned these two incidents. I've included her and Mike Bratcher within this correspondence. Please direct your inquiries to her in future

communications.

Regards,

Nelson Velez • Environmental Specialist - Adv

Environmental Bureau | EMNRD - Oil Conservation Division

1000 Rio Brazos Road | Aztec, NM 87410

(505) 469-6146 | nelson.velez@emnrd.nm.gov

http://www.emnrd.state.nm.us/OCD/

From: Robert Nelson <rnelson@laenvironmental.com>
Sent: Monday, March 4, 2024 8:32 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Barnhill, Amy D. <ABarnhill@chevron.com>; Mark Larson <Mark@laenvironmental.com>
Subject: [EXTERNAL] OCD Rejected Closure Reports

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

Hello Nelson,

On February 27, 2024, Larson & Associates, Inc. (LAI) received notification from Chevron USA, Inc. (Chevron) that NMOCD denied remediation closure report for the Salado Draw 13 Corridor Line (nAPP2227880032) and Salado Draw CTB 24 (nAPP2311640670) (Sites) in Lea County, New Mexico. The reason for the denials were not providing NMOCD prior to collecting remediation (confirmation) soil samples. The Sites were remediated, and closure reports were submitted to the NMOCD prior to the process update changes for the submission of form C-141 release notification and corrective actions, requiring the operator to submit notice of final confirmation sampling via the NMOCD online portal. LAI submitted notification to the NMOCD via email on November 6, 2023 (Salado Draw 13 Corridor Line) and October 16, 2023 (Salado Draw CTB 24). Please see attached.

Question: Does Chevron need to "back date" sampling notification via the NMOCD online portal and/or how may we proceed with resolving this issue? Please find attached the OCD rejection emails and OCD notifications for the respective Sites. If you have any questions, please feel free to contact Amy Barnhill with Chevron at ABarnhill@Chevron.com, Mark

Larson at (432-687-0901) or mark@laenvironmental.com, or myself. Thank you for taking the time to assist us with this matter.

Respectfully,

Robert Nelson
Project Manager
Office – 432-687-0901
Cell – 432-664-4804
rnelson@laenvironmental.com

Appendix E

Laboratory Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 10/13/2023 12:33:56 PM

JOB DESCRIPTION

SD-13 SWD
SDG NUMBER 21-0100-20

JOB NUMBER

880-34132-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

Eurofins Midland

Job Notes

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

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

Authorization

Holly Taylor

Generated
10/13/2023 12:33:56 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Laboratory Job ID: 880-34132-1
SDG: 21-0100-20

Table of Contents

Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-34132-1
Project/Site: SD-13 SWD SDG: 21-0100-20

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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.
¤	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: Larson & Associates, Inc. Job ID: 880-34132-1
Project/Site: SD-13 SWD SDG: 21-0100-20

Job ID: 880-34132-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-34132-1

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

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

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

Receipt
The samples were received on 10/9/2023 8:27 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -0.3°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: C-1 1.5' (880-34132-1), C-2 0-1.5' (880-34132-2), C-3 4.1' (880-34132-3), C-4 4.1' (880-34132-4) and C-5 0-4.1' (880-34132-5).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-63929 and 880-64197 and analytical batch 880-64194 was outside the control limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-64194 recovered above the upper control limit for Toluene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-64194/51).

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-64312 and analytical batch 880-64318 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: C-1 1.5' (880-34132-1), C-2 0-1.5' (880-34132-2), C-3 4.1' (880-34132-3), C-4 4.1' (880-34132-4), C-5 0-4.1' (880-34132-5), (890-5415-A-4-D MS) and (890-5415-A-4-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-64318/20), (CCV 880-64318/5) and (LCS 880-64312/2-A). Evidence of matrix interferences is not obvious.

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.

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Client Sample ID: C-1 1.5'

Date Collected: 10/04/23 11:30
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/09/23 13:05	10/09/23 21:42	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/09/23 13:05	10/09/23 21:42	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/09/23 13:05	10/09/23 21:42	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		10/09/23 13:05	10/09/23 21:42	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/09/23 13:05	10/09/23 21:42	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/09/23 13:05	10/09/23 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*10/09/23 13:05*	*10/09/23 21:42*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*10/09/23 13:05*	*10/09/23 21:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/09/23 21:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			10/10/23 13:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		10/10/23 08:39	10/10/23 13:19	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		10/10/23 08:39	10/10/23 13:19	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		10/10/23 08:39	10/10/23 13:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*142*	*S1+*	*70 - 130*	*10/10/23 08:39*	*10/10/23 13:19*	*1*
o-Terphenyl (Surr)	*121*		*70 - 130*	*10/10/23 08:39*	*10/10/23 13:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**366**		5.00		mg/Kg			10/12/23 19:17	1

Client Sample ID: C-2 0-1.5'

Date Collected: 10/04/23 11:40
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/09/23 13:05	10/09/23 22:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/09/23 13:05	10/09/23 22:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/09/23 13:05	10/09/23 22:02	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		10/09/23 13:05	10/09/23 22:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/09/23 13:05	10/09/23 22:02	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/09/23 13:05	10/09/23 22:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*10/09/23 13:05*	*10/09/23 22:02*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*10/09/23 13:05*	*10/09/23 22:02*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Client Sample ID: C-2 0-1.5'

Date Collected: 10/04/23 11:40
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-2
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/09/23 22:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			10/10/23 13:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		10/10/23 08:39	10/10/23 13:42	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		10/10/23 08:39	10/10/23 13:42	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		10/10/23 08:39	10/10/23 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*146*	*S1+*	*70 - 130*	*10/10/23 08:39*	*10/10/23 13:42*	*1*
o-Terphenyl (Surr)	*126*		*70 - 130*	*10/10/23 08:39*	*10/10/23 13:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**300**		5.04		mg/Kg			10/12/23 19:34	1

Client Sample ID: C-3 4.1'

Date Collected: 10/04/23 13:25
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/09/23 09:34	10/10/23 05:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/09/23 09:34	10/10/23 05:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/09/23 09:34	10/10/23 05:12	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		10/09/23 09:34	10/10/23 05:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/09/23 09:34	10/10/23 05:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/09/23 09:34	10/10/23 05:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*10/09/23 09:34*	*10/10/23 05:12*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*10/09/23 09:34*	*10/10/23 05:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/10/23 05:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			10/10/23 14:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		10/10/23 08:39	10/10/23 14:03	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		10/10/23 08:39	10/10/23 14:03	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Client Sample ID: C-3 4.1'

Date Collected: 10/04/23 13:25
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		10/10/23 08:39	10/10/23 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*152*	*S1+*	*70 - 130*	*10/10/23 08:39*	*10/10/23 14:03*	*1*
o-Terphenyl (Surr)	*131*	*S1+*	*70 - 130*	*10/10/23 08:39*	*10/10/23 14:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**195**		4.96		mg/Kg			10/12/23 19:40	1

Client Sample ID: C-4 4.1'

Date Collected: 10/04/23 13:35
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/09/23 09:34	10/10/23 05:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/09/23 09:34	10/10/23 05:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/09/23 09:34	10/10/23 05:39	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		10/09/23 09:34	10/10/23 05:39	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/09/23 09:34	10/10/23 05:39	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/09/23 09:34	10/10/23 05:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*	*10/09/23 09:34*	*10/10/23 05:39*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*10/09/23 09:34*	*10/10/23 05:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/10/23 05:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			10/10/23 14:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		10/10/23 08:39	10/10/23 14:25	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		10/10/23 08:39	10/10/23 14:25	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		10/10/23 08:39	10/10/23 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*147*	*S1+*	*70 - 130*	*10/10/23 08:39*	*10/10/23 14:25*	*1*
o-Terphenyl (Surr)	*130*		*70 - 130*	*10/10/23 08:39*	*10/10/23 14:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**441**		5.04		mg/Kg			10/12/23 19:46	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Client Sample ID: C-5 0-4.1'

Date Collected: 10/04/23 13:45
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-5

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/09/23 09:34	10/10/23 06:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/09/23 09:34	10/10/23 06:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/09/23 09:34	10/10/23 06:05	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/09/23 09:34	10/10/23 06:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/09/23 09:34	10/10/23 06:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/09/23 09:34	10/10/23 06:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*10/09/23 09:34*	*10/10/23 06:05*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*10/09/23 09:34*	*10/10/23 06:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			10/10/23 06:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/10/23 14:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/10/23 08:39	10/10/23 14:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/10/23 08:39	10/10/23 14:47	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/10/23 08:39	10/10/23 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*135*	*S1+*	*70 - 130*	*10/10/23 08:39*	*10/10/23 14:47*	*1*
o-Terphenyl (Surr)	*115*		*70 - 130*	*10/10/23 08:39*	*10/10/23 14:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**164**		5.03		mg/Kg			10/12/23 19:51	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-34132-1	C-1 1.5'	79	72
880-34132-1 MS	C-1 1.5'	121	116
880-34132-1 MSD	C-1 1.5'	118	106
880-34132-2	C-2 0-1.5'	74	87
880-34132-3	C-3 4.1'	99	88
880-34132-4	C-4 4.1'	129	118
880-34132-5	C-5 0-4.1'	101	94
LCS 880-64144/1-A	Lab Control Sample	124	86
LCS 880-64197/1-A	Lab Control Sample	114	97
LCSD 880-64144/2-A	Lab Control Sample Dup	127	121
LCSD 880-64197/2-A	Lab Control Sample Dup	112	79
MB 880-63899/5-A	Method Blank	72	97
MB 880-63929/5-A	Method Blank	66 S1-	95
MB 880-64144/5-A	Method Blank	72	91
MB 880-64197/5-A	Method Blank	68 S1-	87

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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-34132-1	C-1 1.5'	142 S1+	121
880-34132-2	C-2 0-1.5'	146 S1+	126
880-34132-3	C-3 4.1'	152 S1+	131 S1+
880-34132-4	C-4 4.1'	147 S1+	130
880-34132-5	C-5 0-4.1'	135 S1+	115
LCS 880-64312/2-A	Lab Control Sample	126	135 S1+
LCSD 880-64312/3-A	Lab Control Sample Dup	97	97
MB 880-64312/1-A	Method Blank	189 S1+	176 S1+

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-63899/5-A
Matrix: Solid
Analysis Batch: 64184

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63899

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/03/23 15:11	10/09/23 10:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/03/23 15:11	10/09/23 10:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/03/23 15:11	10/09/23 10:44	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/03/23 15:11	10/09/23 10:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/03/23 15:11	10/09/23 10:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/03/23 15:11	10/09/23 10:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*10/03/23 15:11*	*10/09/23 10:44*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*10/03/23 15:11*	*10/09/23 10:44*	*1*

Lab Sample ID: MB 880-63929/5-A
Matrix: Solid
Analysis Batch: 64194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63929

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/04/23 09:20	10/09/23 12:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/04/23 09:20	10/09/23 12:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/04/23 09:20	10/09/23 12:21	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/04/23 09:20	10/09/23 12:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/04/23 09:20	10/09/23 12:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/04/23 09:20	10/09/23 12:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*10/04/23 09:20*	*10/09/23 12:21*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*10/04/23 09:20*	*10/09/23 12:21*	*1*

Lab Sample ID: MB 880-64144/5-A
Matrix: Solid
Analysis Batch: 64184

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64144

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/06/23 13:05	10/09/23 21:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/06/23 13:05	10/09/23 21:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/06/23 13:05	10/09/23 21:20	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/06/23 13:05	10/09/23 21:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/06/23 13:05	10/09/23 21:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/06/23 13:05	10/09/23 21:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*10/06/23 13:05*	*10/09/23 21:20*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*10/06/23 13:05*	*10/09/23 21:20*	*1*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

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

Lab Sample ID: LCS 880-64144/1-A
Matrix: Solid
Analysis Batch: 64184

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64144

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08943		mg/Kg		89	70 - 130		
Toluene			0.100	0.09381		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.1133		mg/Kg		113	70 - 130		
m,p-Xylenes			0.200	0.2485		mg/Kg		124	70 - 130		
o-Xylene			0.100	0.1245		mg/Kg		125	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

Lab Sample ID: LCSD 880-64144/2-A
Matrix: Solid
Analysis Batch: 64184

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64144

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09101		mg/Kg		91	70 - 130	2	35
Toluene			0.100	0.1015		mg/Kg		101	70 - 130	8	35
Ethylbenzene			0.100	0.1156		mg/Kg		116	70 - 130	2	35
m,p-Xylenes			0.200	0.2512		mg/Kg		126	70 - 130	1	35
o-Xylene			0.100	0.1259		mg/Kg		126	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*

Lab Sample ID: 880-34132-1 MS
Matrix: Solid
Analysis Batch: 64184

Client Sample ID: C-1 1.5'
Prep Type: Total/NA
Prep Batch: 64144

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.08042		mg/Kg		81	70 - 130		
Toluene	<0.00199	U	0.0998	0.09016		mg/Kg		90	70 - 130		
Ethylbenzene	<0.00199	U	0.0998	0.1041		mg/Kg		104	70 - 130		
m,p-Xylenes	<0.00398	U	0.200	0.2162		mg/Kg		108	70 - 130		
o-Xylene	<0.00199	U	0.0998	0.1073		mg/Kg		108	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 880-34132-1 MSD
Matrix: Solid
Analysis Batch: 64184

Client Sample ID: C-1 1.5'
Prep Type: Total/NA
Prep Batch: 64144

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.08923		mg/Kg		90	70 - 130	10	35
Toluene	<0.00199	U	0.0996	0.1004		mg/Kg		101	70 - 130	11	35
Ethylbenzene	<0.00199	U	0.0996	0.1194		mg/Kg		120	70 - 130	14	35

QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-34132-1
Project/Site: SD-13 SWD SDG: 21-0100-20

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

Lab Sample ID: 880-34132-1 MSD **Client Sample ID: C-1 1.5'**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 64184 **Prep Batch: 64144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m,p-Xylenes	<0.00398	U	0.199	0.2444		mg/Kg		123	70 - 130	12	35
o-Xylene	<0.00199	U	0.0996	0.1181		mg/Kg		119	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: MB 880-64197/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 64194 **Prep Batch: 64197**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/09/23 09:34	10/10/23 01:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/09/23 09:34	10/10/23 01:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/09/23 09:34	10/10/23 01:45	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		10/09/23 09:34	10/10/23 01:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/09/23 09:34	10/10/23 01:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/09/23 09:34	10/10/23 01:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*10/09/23 09:34*	*10/10/23 01:45*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*10/09/23 09:34*	*10/10/23 01:45*	*1*

Lab Sample ID: LCS 880-64197/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 64194 **Prep Batch: 64197**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08681		mg/Kg		87	70 - 130		
Toluene			0.100	0.08481		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.07876		mg/Kg		79	70 - 130		
m,p-Xylenes			0.200	0.1616		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.08910		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-64197/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 64194 **Prep Batch: 64197**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08459		mg/Kg		85	70 - 130	3	35
Toluene			0.100	0.08333		mg/Kg		83	70 - 130	2	35
Ethylbenzene			0.100	0.08601		mg/Kg		86	70 - 130	9	35
m,p-Xylenes			0.200	0.1652		mg/Kg		83	70 - 130	2	35
o-Xylene			0.100	0.08903		mg/Kg		89	70 - 130	0	35

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

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

Lab Sample ID: MB 880-64312/1-A
Matrix: Solid
Analysis Batch: 64318

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64312

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/09/23 17:24	10/10/23 09:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/09/23 17:24	10/10/23 09:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/09/23 17:24	10/10/23 09:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	189	S1+	70 - 130	10/09/23 17:24	10/10/23 09:17	1
o-Terphenyl (Surr)	176	S1+	70 - 130	10/09/23 17:24	10/10/23 09:17	1

Lab Sample ID: LCS 880-64312/2-A
Matrix: Solid
Analysis Batch: 64318

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64312

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	916.1		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	879.0		mg/Kg		88	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	126		70 - 130
o-Terphenyl (Surr)	135	S1+	70 - 130

Lab Sample ID: LCSD 880-64312/3-A
Matrix: Solid
Analysis Batch: 64318

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64312

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	895.5		mg/Kg		90	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	807.7		mg/Kg		81	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	97		70 - 130
o-Terphenyl (Surr)	97		70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-64406/1-A
Matrix: Solid
Analysis Batch: 64551

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/12/23 19:01	1

Lab Sample ID: LCS 880-64406/2-A
Matrix: Solid
Analysis Batch: 64551

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.7		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-64406/3-A
Matrix: Solid
Analysis Batch: 64551

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	252.9		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 880-34132-1 MS
Matrix: Solid
Analysis Batch: 64551

Client Sample ID: C-1 1.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	366		250	606.9		mg/Kg		96	90 - 110		

Lab Sample ID: 880-34132-1 MSD
Matrix: Solid
Analysis Batch: 64551

Client Sample ID: C-1 1.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	366		250	607.6		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

GC VOA

Prep Batch: 63899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-63899/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 63929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-63929/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 64144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-1	C-1 1.5'	Total/NA	Solid	5035	
880-34132-2	C-2 0-1.5'	Total/NA	Solid	5035	
MB 880-64144/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64144/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64144/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-34132-1 MS	C-1 1.5'	Total/NA	Solid	5035	
880-34132-1 MSD	C-1 1.5'	Total/NA	Solid	5035	

Analysis Batch: 64184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-1	C-1 1.5'	Total/NA	Solid	8021B	64144
880-34132-2	C-2 0-1.5'	Total/NA	Solid	8021B	64144
MB 880-63899/5-A	Method Blank	Total/NA	Solid	8021B	63899
MB 880-64144/5-A	Method Blank	Total/NA	Solid	8021B	64144
LCS 880-64144/1-A	Lab Control Sample	Total/NA	Solid	8021B	64144
LCSD 880-64144/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64144
880-34132-1 MS	C-1 1.5'	Total/NA	Solid	8021B	64144
880-34132-1 MSD	C-1 1.5'	Total/NA	Solid	8021B	64144

Analysis Batch: 64194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-3	C-3 4.1'	Total/NA	Solid	8021B	64197
880-34132-4	C-4 4.1'	Total/NA	Solid	8021B	64197
880-34132-5	C-5 0-4.1'	Total/NA	Solid	8021B	64197
MB 880-63929/5-A	Method Blank	Total/NA	Solid	8021B	63929
MB 880-64197/5-A	Method Blank	Total/NA	Solid	8021B	64197
LCS 880-64197/1-A	Lab Control Sample	Total/NA	Solid	8021B	64197
LCSD 880-64197/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64197

Prep Batch: 64197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-3	C-3 4.1'	Total/NA	Solid	5035	
880-34132-4	C-4 4.1'	Total/NA	Solid	5035	
880-34132-5	C-5 0-4.1'	Total/NA	Solid	5035	
MB 880-64197/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64197/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64197/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 64396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-1	C-1 1.5'	Total/NA	Solid	Total BTEX	
880-34132-2	C-2 0-1.5'	Total/NA	Solid	Total BTEX	
880-34132-3	C-3 4.1'	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-34132-1
Project/Site: SD-13 SWD SDG: 21-0100-20

GC VOA (Continued)

Analysis Batch: 64396 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-4	C-4 4.1'	Total/NA	Solid	Total BTEX	
880-34132-5	C-5 0-4.1'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 64312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-1	C-1 1.5'	Total/NA	Solid	8015NM Prep	
880-34132-2	C-2 0-1.5'	Total/NA	Solid	8015NM Prep	
880-34132-3	C-3 4.1'	Total/NA	Solid	8015NM Prep	
880-34132-4	C-4 4.1'	Total/NA	Solid	8015NM Prep	
880-34132-5	C-5 0-4.1'	Total/NA	Solid	8015NM Prep	
MB 880-64312/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-64312/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-64312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 64318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-1	C-1 1.5'	Total/NA	Solid	8015B NM	64312
880-34132-2	C-2 0-1.5'	Total/NA	Solid	8015B NM	64312
880-34132-3	C-3 4.1'	Total/NA	Solid	8015B NM	64312
880-34132-4	C-4 4.1'	Total/NA	Solid	8015B NM	64312
880-34132-5	C-5 0-4.1'	Total/NA	Solid	8015B NM	64312
MB 880-64312/1-A	Method Blank	Total/NA	Solid	8015B NM	64312
LCS 880-64312/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	64312
LCSD 880-64312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	64312

Analysis Batch: 64455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-1	C-1 1.5'	Total/NA	Solid	8015 NM	
880-34132-2	C-2 0-1.5'	Total/NA	Solid	8015 NM	
880-34132-3	C-3 4.1'	Total/NA	Solid	8015 NM	
880-34132-4	C-4 4.1'	Total/NA	Solid	8015 NM	
880-34132-5	C-5 0-4.1'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 64406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-1	C-1 1.5'	Soluble	Solid	DI Leach	
880-34132-2	C-2 0-1.5'	Soluble	Solid	DI Leach	
880-34132-3	C-3 4.1'	Soluble	Solid	DI Leach	
880-34132-4	C-4 4.1'	Soluble	Solid	DI Leach	
880-34132-5	C-5 0-4.1'	Soluble	Solid	DI Leach	
MB 880-64406/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64406/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64406/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34132-1 MS	C-1 1.5'	Soluble	Solid	DI Leach	
880-34132-1 MSD	C-1 1.5'	Soluble	Solid	DI Leach	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

HPLC/IC

Analysis Batch: 64551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34132-1	C-1 1.5'	Soluble	Solid	300.0	64406
880-34132-2	C-2 0-1.5'	Soluble	Solid	300.0	64406
880-34132-3	C-3 4.1'	Soluble	Solid	300.0	64406
880-34132-4	C-4 4.1'	Soluble	Solid	300.0	64406
880-34132-5	C-5 0-4.1'	Soluble	Solid	300.0	64406
MB 880-64406/1-A	Method Blank	Soluble	Solid	300.0	64406
LCS 880-64406/2-A	Lab Control Sample	Soluble	Solid	300.0	64406
LCSD 880-64406/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64406
880-34132-1 MS	C-1 1.5'	Soluble	Solid	300.0	64406
880-34132-1 MSD	C-1 1.5'	Soluble	Solid	300.0	64406

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Client Sample ID: C-1 1.5'

Date Collected: 10/04/23 11:30
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	64144	10/09/23 13:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64184	10/09/23 21:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64396	10/09/23 21:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			64455	10/10/23 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	64312	10/10/23 08:39	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64318	10/10/23 13:19	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64406	10/10/23 15:35	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64551	10/12/23 19:17	CH	EET MID

Client Sample ID: C-2 0-1.5'

Date Collected: 10/04/23 11:40
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	64144	10/09/23 13:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64184	10/09/23 22:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64396	10/09/23 22:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			64455	10/10/23 13:42	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	64312	10/10/23 08:39	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64318	10/10/23 13:42	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	64406	10/10/23 15:35	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64551	10/12/23 19:34	CH	EET MID

Client Sample ID: C-3 4.1'

Date Collected: 10/04/23 13:25
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	64197	10/09/23 09:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64194	10/10/23 05:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64396	10/10/23 05:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			64455	10/10/23 14:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	64312	10/10/23 08:39	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64318	10/10/23 14:03	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	64406	10/10/23 15:35	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64551	10/12/23 19:40	CH	EET MID

Client Sample ID: C-4 4.1'

Date Collected: 10/04/23 13:35
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	64197	10/09/23 09:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64194	10/10/23 05:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64396	10/10/23 05:39	SM	EET MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Client Sample ID: C-4 4.1'

Date Collected: 10/04/23 13:35
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			64455	10/10/23 14:25	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	64312	10/10/23 08:39	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64318	10/10/23 14:25	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	64406	10/10/23 15:35	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64551	10/12/23 19:46	CH	EET MID

Client Sample ID: C-5 0-4.1'

Date Collected: 10/04/23 13:45
Date Received: 10/09/23 08:27

Lab Sample ID: 880-34132-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	64197	10/09/23 09:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64194	10/10/23 06:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64396	10/10/23 06:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			64455	10/10/23 14:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	64312	10/10/23 08:39	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64318	10/10/23 14:47	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	64406	10/10/23 15:35	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64551	10/12/23 19:51	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 SWD

Job ID: 880-34132-1
SDG: 21-0100-20

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34132-1	C-1 1.5'	Solid	10/04/23 11:30	10/09/23 08:27
880-34132-2	C-2 0-1.5'	Solid	10/04/23 11:40	10/09/23 08:27
880-34132-3	C-3 4.1'	Solid	10/04/23 13:25	10/09/23 08:27
880-34132-4	C-4 4.1'	Solid	10/04/23 13:35	10/09/23 08:27
880-34132-5	C-5 0-4.1'	Solid	10/04/23 13:45	10/09/23 08:27

34132

No. 2769

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE 10/9/23 PAGE 1 OF 1

PO# _____ LAB WORK ORDER# _____

PROJECT LOCATION OR NAME SD-13 SWD

LAI PROJECT # 21-0100-20 COLLECTOR STAN BATES

Data Reported to ROBER NELSON / MARC LARSON

TRRP report? ☐ Yes ☒ No

TIME ZONE Time zone/State: MNT

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐	TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐	HOLDPAH ☐	8081 PESTICIDES ☐	8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐	TCLP VOC ☐	TCLP - PEST ☐	HERB ☐	Semi-VOC ☐	TOTAL METALS (RCRA) ☐	OTHER LIST ☐	LEAD - TOTAL ☐	D W 200.8 ☐	TCLP ☐	RCI ☐	TOX ☐	FLASHPOINT ☐	TDS ☐	TSS ☐	% MOISTURE ☐	pH ☐	HEXAVALENT CHROMIUM ☐	CYANIDE ☐	EXPLOSIVES ☐	PECHLORATE ☐	CHLORIDE ☐	ANIONS ☐	ALKALINITY ☐	FIELD NOTES
C-1 1.5'		10/4/23	11:30	S	1				X	X			X			X	X	X																													TPH
C-2 0-1.5'		10/4/23	11:40	S	1																																									
C-3 4.1'		10/4/23	11:25	S	1																																									
C-4 4.1'		10/4/23	11:35	S	1																																									
C-5 0-4.1		10/4/23	11:45	S	1																																									

TOTAL

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
	10/9/23 0827	
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)

LABORATORY Xenco

TURN AROUND TIME
NORMAL ☑
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP -.5/-.3 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☒ HAND DELIVERED

880-34132 Chain of Custody

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-34132-1
SDG Number: 21-0100-20

Login Number: 34132
List Number: 1
Creator: Rodriguez, Leticia

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 11/13/2023 8:57:56 AM

JOB DESCRIPTION

SD-13 Corridor Line 3rd Spike
SDG NUMBER 23-0102-04

JOB NUMBER

880-35344-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

Eurofins Midland

Job Notes

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

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

Authorization

Holly Taylor

Generated
11/13/2023 8:57:56 AM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: SD-13 Corridor Line 3rd Spike

Laboratory Job ID: 880-35344-1
SDG: 23-0102-04

Table of Contents

Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-35344-1
Project/Site: SD-13 Corridor Line 3rd Spike SDG: 23-0102-04

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
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.
¤	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: Larson & Associates, Inc. Job ID: 880-35344-1
Project/Site: SD-13 Corridor Line 3rd Spike SDG: 23-0102-04

Job ID: 880-35344-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-35344-1

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

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

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

Receipt
The sample was received on 11/6/2023 11:22 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.5°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: BF-1 (880-35344-1).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-66262 and 880-66319 and analytical batch 880-66231 was outside the upper control limits.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-66317 and analytical batch 880-66340 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-66340/20), (CCV 880-66340/31), (CCV 880-66340/5), (CCV 880-66340/57) and (CCV 880-66340/58). Evidence of matrix interferences is not obvious.

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.

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 Corridor Line 3rd Spike

Job ID: 880-35344-1
SDG: 23-0102-04

Client Sample ID: BF-1

Date Collected: 11/01/23 12:15
Date Received: 11/06/23 11:22

Lab Sample ID: 880-35344-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/06/23 17:07	11/08/23 03:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/06/23 17:07	11/08/23 03:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/06/23 17:07	11/08/23 03:12	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		11/06/23 17:07	11/08/23 03:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/06/23 17:07	11/08/23 03:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/06/23 17:07	11/08/23 03:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*11/06/23 17:07*	*11/08/23 03:12*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*11/06/23 17:07*	*11/08/23 03:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/08/23 03:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/07/23 17:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/07/23 08:34	11/07/23 17:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/07/23 08:34	11/07/23 17:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/07/23 08:34	11/07/23 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*86*		*70 - 130*	*11/07/23 08:34*	*11/07/23 17:13*	*1*
o-Terphenyl (Surr)	*89*		*70 - 130*	*11/07/23 08:34*	*11/07/23 17:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**47.3**		4.97		mg/Kg			11/11/23 20:25	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 Corridor Line 3rd Spike

Job ID: 880-35344-1
SDG: 23-0102-04

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-35344-1	BF-1	91	107										
LCS 880-66319/1-A	Lab Control Sample	95	108										
LCSD 880-66319/2-A	Lab Control Sample Dup	94	109										
MB 880-66262/5-A	Method Blank	116	152 S1+										
MB 880-66319/5-A	Method Blank	116	160 S1+										

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)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-35344-1	BF-1	86	89										
LCS 880-66317/2-A	Lab Control Sample	103	115										
LCSD 880-66317/3-A	Lab Control Sample Dup	98	101										
MB 880-66317/1-A	Method Blank	162 S1+	169 S1+										

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-35344-1
Project/Site: SD-13 Corridor Line 3rd Spike SDG: 23-0102-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-66262/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 66231 **Prep Batch: 66262**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/06/23 11:29	11/07/23 12:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/06/23 11:29	11/07/23 12:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/06/23 11:29	11/07/23 12:04	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		11/06/23 11:29	11/07/23 12:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/06/23 11:29	11/07/23 12:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/06/23 11:29	11/07/23 12:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*11/06/23 11:29*	*11/07/23 12:04*	*1*
1,4-Difluorobenzene (Surr)	*152*	*S1+*	*70 - 130*	*11/06/23 11:29*	*11/07/23 12:04*	*1*

Lab Sample ID: MB 880-66319/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 66231 **Prep Batch: 66319**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/06/23 17:07	11/07/23 23:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/06/23 17:07	11/07/23 23:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/06/23 17:07	11/07/23 23:40	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		11/06/23 17:07	11/07/23 23:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/06/23 17:07	11/07/23 23:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/06/23 17:07	11/07/23 23:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*11/06/23 17:07*	*11/07/23 23:40*	*1*
1,4-Difluorobenzene (Surr)	*160*	*S1+*	*70 - 130*	*11/06/23 17:07*	*11/07/23 23:40*	*1*

Lab Sample ID: LCS 880-66319/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 66231 **Prep Batch: 66319**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1051		mg/Kg		105	70 - 130		
Toluene			0.100	0.09486		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.08840		mg/Kg		88	70 - 130		
m,p-Xylenes			0.200	0.2102		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1013		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-66319/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 66231 **Prep Batch: 66319**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1032		mg/Kg		103	70 - 130	2	35

QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-35344-1
Project/Site: SD-13 Corridor Line 3rd Spike SDG: 23-0102-04

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

Lab Sample ID: LCSD 880-66319/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 66231 **Prep Batch: 66319**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09356		mg/Kg		94	70 - 130	1	35
Ethylbenzene			0.100	0.08388		mg/Kg		84	70 - 130	5	35
m,p-Xylenes			0.200	0.1941		mg/Kg		97	70 - 130	8	35
o-Xylene			0.100	0.09487		mg/Kg		95	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

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

Lab Sample ID: MB 880-66317/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 66340 **Prep Batch: 66317**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/06/23 16:35	11/07/23 08:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/06/23 16:35	11/07/23 08:58	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/06/23 16:35	11/07/23 08:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*162*	*S1+*	*70 - 130*	*11/06/23 16:35*	*11/07/23 08:58*	*1*
o-Terphenyl (Surr)	*169*	*S1+*	*70 - 130*	*11/06/23 16:35*	*11/07/23 08:58*	*1*

Lab Sample ID: LCS 880-66317/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 66340 **Prep Batch: 66317**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	924.3		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1057		mg/Kg		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*103*		*70 - 130*
o-Terphenyl (Surr)	*115*		*70 - 130*

Lab Sample ID: LCSD 880-66317/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 66340 **Prep Batch: 66317**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	932.7		mg/Kg		93	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1011		mg/Kg		101	70 - 130	4	20

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: SD-13 Corridor Line 3rd Spike

Job ID: 880-35344-1
SDG: 23-0102-04

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

Lab Sample ID: LCSD 880-66317/3-A
Matrix: Solid
Analysis Batch: 66340

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 66317

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*98*		*70 - 130*
o-Terphenyl (Surr)	*101*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-66460/1-A
Matrix: Solid
Analysis Batch: 66746

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/11/23 19:39	1

Lab Sample ID: LCS 880-66460/2-A
Matrix: Solid
Analysis Batch: 66746

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	261.9		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-66460/3-A
Matrix: Solid
Analysis Batch: 66746

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	261.6		mg/Kg		105	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-35344-1
Project/Site: SD-13 Corridor Line 3rd Spike SDG: 23-0102-04

GC VOA

Analysis Batch: 66231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-35344-1	BF-1	Total/NA	Solid	8021B	66319
MB 880-66262/5-A	Method Blank	Total/NA	Solid	8021B	66262
MB 880-66319/5-A	Method Blank	Total/NA	Solid	8021B	66319
LCS 880-66319/1-A	Lab Control Sample	Total/NA	Solid	8021B	66319
LCSD 880-66319/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	66319

Prep Batch: 66262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-66262/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 66319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-35344-1	BF-1	Total/NA	Solid	5035	
MB 880-66319/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-66319/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-66319/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 66522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-35344-1	BF-1	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 66317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-35344-1	BF-1	Total/NA	Solid	8015NM Prep	
MB 880-66317/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-66317/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-66317/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 66340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-35344-1	BF-1	Total/NA	Solid	8015B NM	66317
MB 880-66317/1-A	Method Blank	Total/NA	Solid	8015B NM	66317
LCS 880-66317/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	66317
LCSD 880-66317/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	66317

Analysis Batch: 66482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-35344-1	BF-1	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 66460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-35344-1	BF-1	Soluble	Solid	DI Leach	
MB 880-66460/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-66460/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-66460/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 Corridor Line 3rd Spike

Job ID: 880-35344-1
SDG: 23-0102-04

HPLC/IC

Analysis Batch: 66746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-35344-1	BF-1	Soluble	Solid	300.0	66460
MB 880-66460/1-A	Method Blank	Soluble	Solid	300.0	66460
LCS 880-66460/2-A	Lab Control Sample	Soluble	Solid	300.0	66460
LCSD 880-66460/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	66460

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: SD-13 Corridor Line 3rd Spike

Job ID: 880-35344-1
SDG: 23-0102-04

Client Sample ID: BF-1

Date Collected: 11/01/23 12:15
Date Received: 11/06/23 11:22

Lab Sample ID: 880-35344-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	66319	11/06/23 17:07	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	66231	11/08/23 03:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			66522	11/08/23 03:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			66482	11/07/23 17:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	66317	11/07/23 08:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	66340	11/07/23 17:13	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	66460	11/07/23 18:56	SMC	EET MID
Soluble	Analysis	300.0		1			66746	11/11/23 20:25	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 Corridor Line 3rd Spike

Job ID: 880-35344-1
SDG: 23-0102-04

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 Corridor Line 3rd Spike

Job ID: 880-35344-1
SDG: 23-0102-04

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: SD-13 Corridor Line 3rd Spike

Job ID: 880-35344-1
SDG: 23-0102-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-35344-1	BF-1	Solid	11/01/23 12:15	11/06/23 11:22

35344 No. 3205

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to ROBERT NELSON / MARC LARSON

DATE ______ PAGE ___ OF ___
PO# ______ LAB WORK ORDER# ______
PROJECT LOCATION OR NAME SD-13 CORRIDOR LINE 3RD SPILL
LAI PROJECT # 23-0102-04 COLLECTOR STAN BATES

TRRP report? ☐ Yes ☒ No

TIME ZONE Time zone/State: MNT / NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐, TRPH 418.1 ☐, TPH 1005 ☐ TPH 1006 ☐, GASOLINE MOD 8015 ☒, DIESEL - MOD 8015 ☒, OIL - MOD 8015 ☒, VOC 8260 ☐, SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐, 8081 PESTICIDES ☐ 8151 HERBICIDES ☐, 8082 PCBS ☐, TCLP - METALS (RCRA) ☐ TCLP VOC ☐, TCLP - PEST ☐ HERB ☐ Semi-VOC ☐, TOTAL METALS (RCRA) ☐ OTHER LIST ☐, LEAD - TOTAL ☐ D W 200 8 ☐ TCLP ☐, RCI ☐ TOX ☐ FLASHPOINT ☐, TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐, pH ☐ HEXAVALENT CHROMIUM ☐, EXPLOSIVES ☐ PECHLORATE ☐, CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 / NaOH	ICE	UNPRESSERVED	BTEX	GASOLINE MOD 8015	DIESEL - MOD 8015	OIL - MOD 8015	CHLORIDES	FIELD NOTES
BF-1		11/1/23	12:15	S	1				X		X	X	X	X	X	

TOTAL 1

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
[signature]	11/1/23 1122	[signature]

LABORATORY Xenco

TURN AROUND TIME
NORMAL ☑
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 2.3/2.5 THERM# JK8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # ______
☐ HAND DELIVERED

880-35344 Chain of Custody

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-35344-1
SDG Number: 23-0102-04

Login Number: 35344
List Number: 1
Creator: Rodriguez, Leticia

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	

Appendix F

Photographic Documentation

Impacted area on September 19, 2022, viewing east.

Impacted area on September 19, 2022, viewing northeast.

Impacted area in pasture, viewing to the east.

Impacted area in pasture, viewing to the west.

Impacted area in pasture, viewing to the south.

Excavated area in pasture, viewing to the east.

Excavated area in the pasture, viewing to the east.

Excavated area in the pasture, viewing to the to the northeast.

Excavated area in the pasture, viewing to the east.

Excavated area in the pasture, viewing to the west.

Backfilled and seed excavation, viewing to the west.

Backfilled and seeded excavation, viewing to the north.

Backfilled and seeded excavation, viewing to the northwest.

Backfilled and seeded excavation, viewing to the northeast.

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Energy, Minerals and Natural Resources
Oil Conservation Division
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Santa Fe, NM 87505

QUESTIONS

Action 349146

QUESTIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 349146
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2227880032**
Incident Name	**NAPP2227880032 SALADO DRAW 13 SWD @ 0**
Incident Type	**Produced Water Release**
Incident Status	**Reclamation Report Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	SALADO DRAW 13 SWD
Date Release Discovered	09/19/2022
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Crude Oil | Released: 1 BBL | Recovered: 1 BBL | Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Produced Water | Released: 7 BBL | Recovered: 4 BBL | Lost: 3 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)	Lay Flat Hose

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QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 349146
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

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

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: Amy Barnhill Title: Waste & Water Specialist Email: ABarnhill@chevron.com Date: 05/30/2024

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QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 349146
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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	Direct Measurement
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	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

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)	617
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	70.7
GRO+DRO (EPA SW-846 Method 8015M)	70.7
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	11/01/2023
On what date will (or did) the final sampling or liner inspection occur	10/04/2023
On what date will (or was) the remediation complete(d)	10/04/2023
What is the estimated surface area (in square feet) that will be reclaimed	400
What is the estimated volume (in cubic yards) that will be reclaimed	60
What is the estimated surface area (in square feet) that will be remediated	374
What is the estimated volume (in cubic yards) that will be remediated	50
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 349146
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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	MILESTONE WASTE TREATMENT AND INJECTION FACILITY [fDHR1918357813]
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: 05/30/2024
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.	

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QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 349146
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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

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QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 349146
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**349155**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**10/04/2023**
What was the (estimated) number of samples that were to be gathered	**5**
What was the sampling surface area in square feet	**400**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	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	374
What was the total volume (cubic yards) remediated	50
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	400
What was the total volume (in cubic yards) reclaimed	60
Summarize any additional remediation activities not included by answers (above)	R&M backfilled the excavation with non-waste containing backfill material from the Battle Axe Headquarters borrow pit. Additional topsoil was used to recontour offsite areas to resemble previous surface conditions.

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: 05/30/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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District III
1000 Rio Brazos Rd., Aztec, NM 87410
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District IV
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
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Santa Fe, NM 87505

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 349146
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	400
What was the total volume of replacement material (in cubic yards) for this site	60
Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a 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.	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeding commence(d)	11/16/2023
Summarize any additional reclamation activities not included by answers (above)	LAI personnel seeded the remediation area with BLM Mix #2. Backfill notification was provided to the NMOCD on November 16, 2023.
The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 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: 05/30/2024

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QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 349146
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Revegetation Report	
Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.	
Requesting a restoration complete approval with this submission	No
Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.	

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CONDITIONS

Action 349146

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 349146
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

CONDITIONS

Created By	Condition	Condition Date
scwells	Reclamation approved.	5/30/2024
scwells	Operator failed to provide proper Sampling Notification pursuant to 19.15.29.12.D.(1).(a) NMAC. Failure to provide proper sampling notice is a compliance issue and OCD may pursue compliance actions pursuant to 19.15.5 NMAC. Operator shall ensure future compliance with 19.15.29.12.D.(1).(a) NMAC	5/30/2024