State of New Mexico
Oil Conservation Division

Incident ID	nRM2009062305
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	25.25 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nRM2009062305
District RP	
Facility ID	
Application ID	

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

Printed Name: Amy Barnhill Title: Waste and Water Specialist

Signature: Date: 8-4-2020

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

OCD Only

Received by: Cristina Eads Date: 08/04/2020

State of New Mexico
Oil Conservation Division

Incident ID	nRM2009062305
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Amy Barnhill Title: Waste and Water Specialist

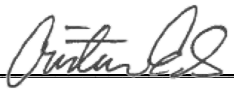
Signature:  Date: 8-4-2020

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

OCD Only

Received by: Cristina Eads Date: 08/04/2020

- [x] Approved
- [ ] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature:  Date: 09/29/2020

nRM2009062305
Delineation Report and Remediation Plan
Gravitas SWD
Produced Water Release
Eddy County, New Mexico

Latitude: N 32.066144°
Longitude: W -104.164853°

LAI Project No. 20-0107-10

July 20, 2020

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

Prepared by:
Larson & Associates, Inc.
507 North Marienfeld Street, Suite 202
Midland, Texas 79701

Mark J. Larson, P.G.
Certified Professional Geologist #10490

Robert Nelson
Sr. Geoscientist

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Appendices

1.0 INTRODUCTION

Larson & Associates, Inc. (LAI), has prepared this delineation report and remediation plan on behalf of Chevron USA Inc. (Chevron) for submittal to the New Mexico Oil Conservation Division (OCD) District 2 for a produced water release at the Hayhurst New Mexico SWD (Site) located in Unit N (SE/4, SW/4), Section 2, Township 26 South, Range 27 East in Eddy County New Mexico. The geodetic position is North 32.066144° and West -104.164853°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The release was discovered on March 1, 2020, due to a hole on inlet piping resulting from corrosion. Chevron reported that approximately 8.53 barrels (bbls) of produced water was released within the secondary containment (lined berm) and approximately 8.5 bbls were recovered. Inspection of the lined containment did not reveal any defects. The affected area measures approximately 18,551 square feet and the release was confined within the lined containment. Appendix A presents initial Chevron spill documentation. The initial C-141 was assigned an incident number of nRM2009062305.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,222 feet above mean sea level (msl);
- The surface topography gradually decreases to the southeast;
- There are no karst or surface water features within 1,000 feet of the Site;
- The soils are designated as “Reeves-Reagan loams, 0 to 3 percent slopes”, consisting of 0 to 8 inches of loam, underlain by 8 to 32 inches of clay loam, and 32 to 60 inches of gypsiferous material;
- The geology consists of the Rustler Formation (Upper Permian)- Siltstone, gypsum, sandstone, and dolomite deposits (USGS);
- Groundwater occurs at approximately 25.25 feet below ground surface (bgs) based on depth to groundwater measurements 72 hours after drilling a soil boring (BH-1).

1.3 Remediation Action Levels

The following remediation standards are based on closure criteria for soils impacted by a release as presented in Table 1 of 19.15.29 NMAC:

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 100 mg/Kg
- Chloride 600 mg/Kg

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

2.0 DELINEATION

On April 3 and May 13, 2020, LAI personnel used a stainless steel hand auger to collect soil samples from nine (9) locations inside of the spill area and in each cardinal direction of the spill (SP-1 through SP-9) to

vertically and horizontally delineate the release. The samples were collected to approximately 0.5 feet below ground surface (bgs). The soil samples were delivered under chain of custody and preservation to Xenco Laboratories (Xenco) in Midland, Texas. The laboratory analyzed the samples for benzene, toluene, ethylbenzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28) and oil range organics (>C28-C35), and chloride by EPA SW-846 Methods 8021B and 8015M, and M300, respectively. Figure 2 presents an aerial map showing the sample locations. Benzene, BTEX, and TPH reported below the remediation action levels of 10 milligrams per kilogram (mg/Kg) 50 mg/Kg, and 100 mg/Kg, respectively, in all samples. Chloride exceeded the surface restoration limits (19.15.29.13 NMAC) of 600 mg/Kg in SP-1 (0 to 0.5') at 7,050 mg/Kg.

On April 28 and 29, 2020, LAI personnel used direct push technology (DPT) to further delineate the release. Soil samples were collected at 1, 3, and 5 feet bgs. The samples were delivered under chain of custody and preservation to Xenco which analyzed the samples for BTEX, TPH, including C6-C12, >C12-C28 and >C28-C35, and chloride by EPA SW-846 Methods 8021B and 8015M, and M300, respectively. Chloride was delineated below the remediation limit 600 mg/Kg at all sample locations. Table 1 presents the soil sample analytical data summary. Appendix B presents the laboratory reports.

3.0 Remediation Plan

Chevron proposes the following remedial actions:

- Excavate soil from an area measuring approximately 458 square feet, encompassing SP-1 to 1-foot bgs.
- Collect five (5) point composite bottom and sidewall confirmation soil samples every 200 square feet of excavation and analyze for BTEX, TPH and chloride.
- Backfill excavations with clean caliche on the pad assuming achievement of OCD remediation levels.
- Prepare report with photographs for submittal to OCD District 2.

Figure 3 presents the proposed excavation areas.

Tables

Table 1
Soil Sample Analytical Data Summary
Gravitas SWD
Eddy County, New Mexico
North , West

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)
Remediation Level:				**10**	**50**				**100**	**600**
S-1	0 - 0.5	4/3/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	**7,050**
	1	4/29/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<5.05
	3	4/29/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	5.27
	5	4/29/2020	In-Situ	--	--	<50.0	<50.0	<50.0	<50.0	8.46
S-2	0 - 0.5	4/3/2020	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	55.6
	1	4/28/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	109
	3	4/28/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	82.4
	5	4/28/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	34.7
S-3	0 - 0.5	4/3/2020	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	43.3
	1	4/28/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	23.9
	3	4/28/2020	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	45.8
	5	4/28/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	135
S-4	0 - 0.5	4/3/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	9.03
	1	4/29/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	162
	3	4/29/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	372
	5	4/29/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	22.8
S-5	0 - 0.5	4/3/2020	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	12.1
	1	4/29/2020	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	119
	3	4/29/2020	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	27.1
	5	4/29/2020	In-Situ	--	--	<50.0	<50.0	<50.0	<50.0	7.59

Table 1
Soil Sample Analytical Data Summary
Gravitas SWD
Eddy County, New Mexico
North , West

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)
Remediation Level:				**10**	**50**				**100**	**600**
S-6	0 - 0.5	4/3/2020	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	146
	1	4/29/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	248
	3	4/29/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	103
	5	4/29/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	52.1
S-7	0 - 0.5	4/3/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	30.3
	1	4/29/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	77.1
	3	4/29/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	61.7
	5	4/29/2020	In-Situ	--	--	<49.9	<49.9	<49.9	<49.9	11.9
S-8	0 - 0.5	4/3/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	92.6
	1	4/29/2020	In-Situ	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	75.4
	3	4/29/2020	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	27.8
	5	4/29/2020	In-Situ	--	--	<50.0	59.5	<50.0	59.5	<4.99
S-9	0 - 0.5	5/13/2020	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	537
	0.5 - 1	5/13/2020	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	364

Notes: Analysis performed by Xenco Laboratories
Depth in feet below ground surface (bgs)
mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)
<: denotes concentration less than analytical method reporting limit
Bold and Highlighted exceeds OCD remediation action limits

Figures

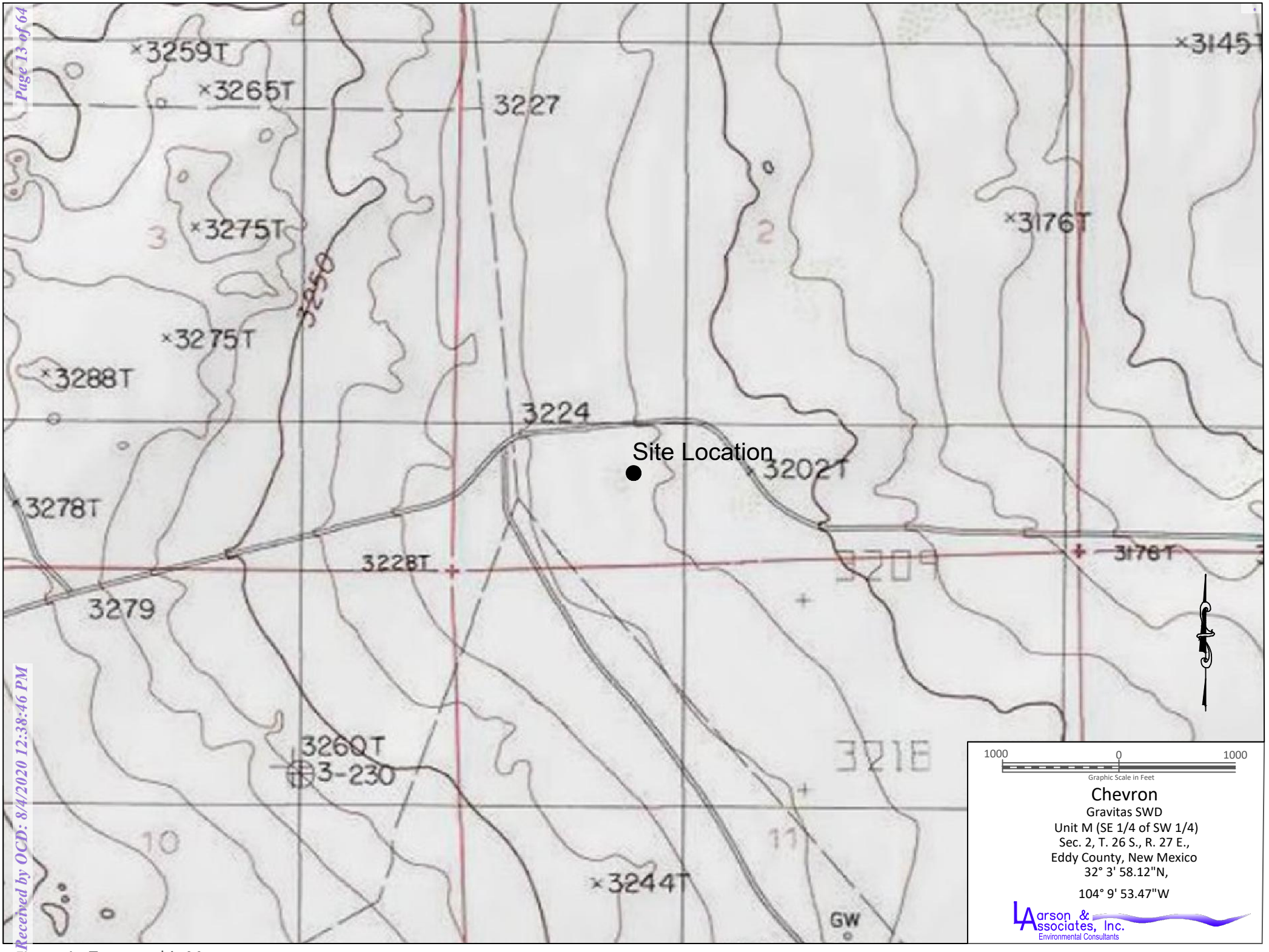


Figure 1 - Topographic Map

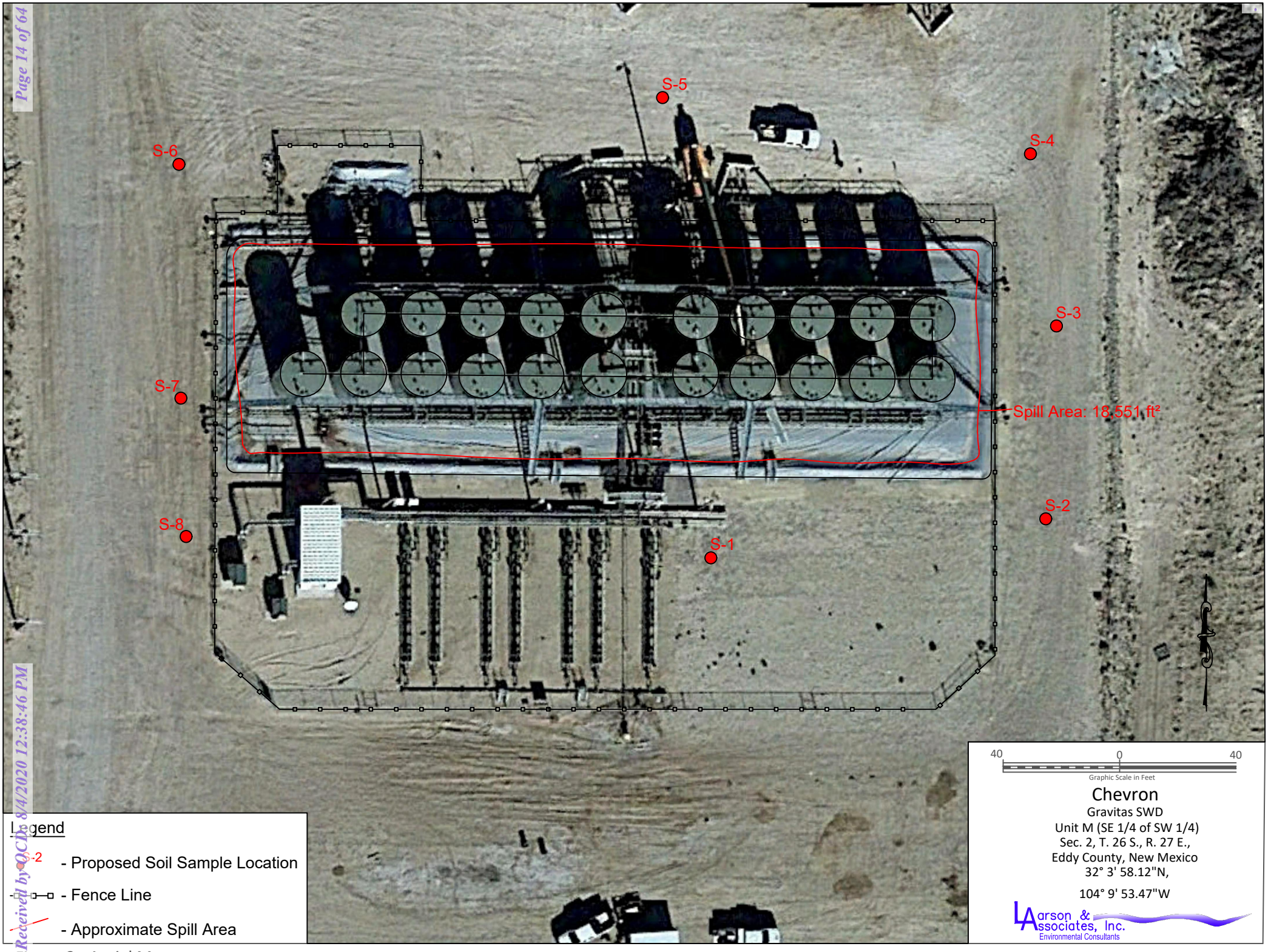


Figure 2 - Aerial Map

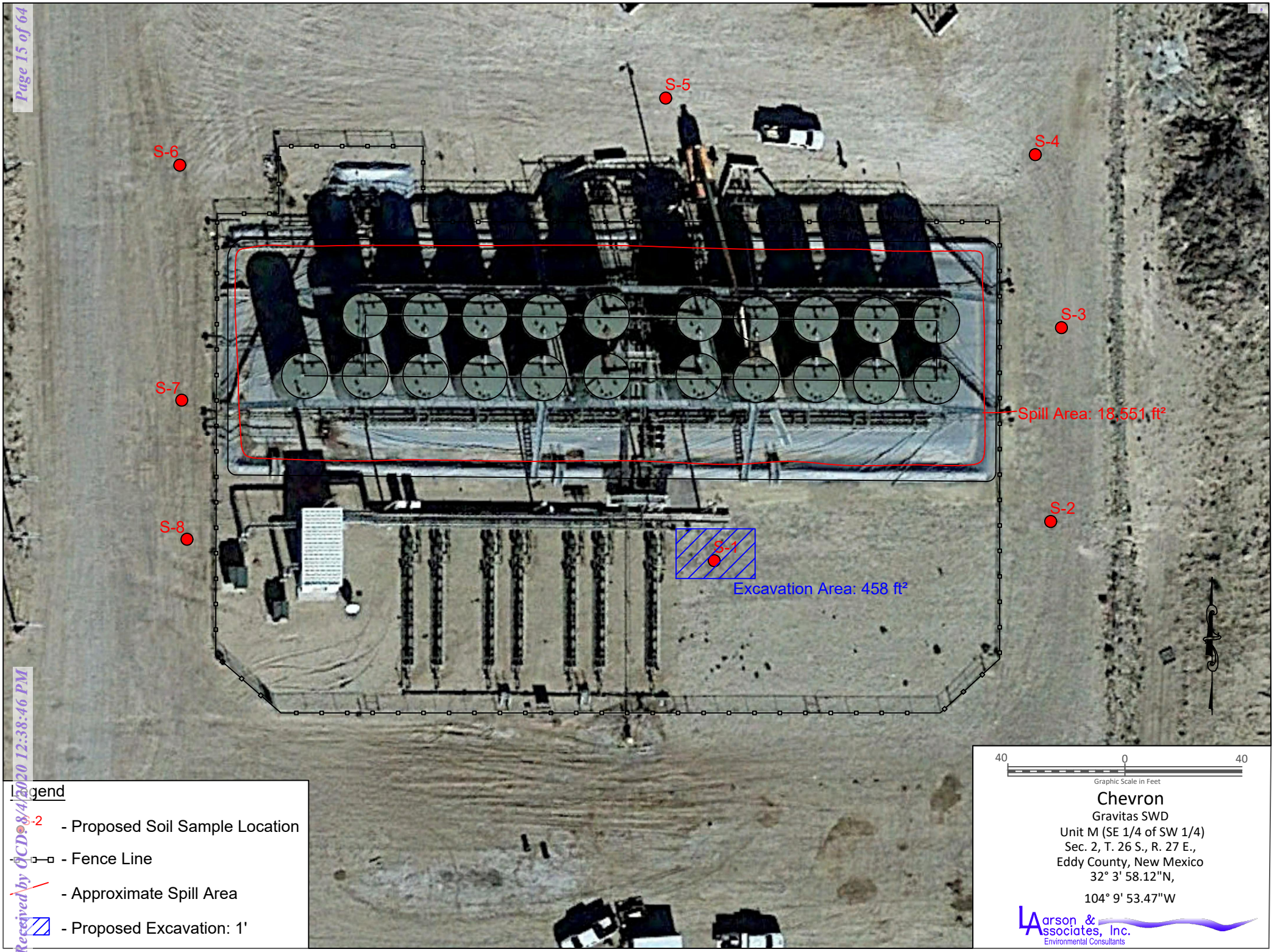


Figure 3 - Aerial Map Showing Proposed Excavation Location

Appendix A

Chevron Spill Calculation

Incident ID	
District RP	
Facility ID	
Application ID	

MCBU Spill Calculations Worksheet

Only Change Values in Columns B, C & D !

Rectangular spill **Do Not Change Formulas!!**

All dimensions in feet !

	Length	Width	Depth	Total Volume of Fluid in Bbls
Average total depth	115	5	0.0833	8.53
Use oil depth or skim thickness	0	0	0	0.00
			.	8.53

Appendix B

Laboratory Reports

Certificate of Analysis Summary 657958

Larson and Associates, Inc., Midland, TX

Project Name: Chevron.Gravitas SWD

Project Id: 20-0107-10
Contact: Mark Larson
Project Location:

Date Received in Lab: Mon 04.06.2020 09:20
Report Date: 04.14.2020 10:06
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	657958-001		657958-002		657958-003		657958-004		657958-005		657958-006	
	Field Id:	S-1		S-2		S-3		S-4		S-5		S-6	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.03.2020 12:00		04.03.2020 12:05		04.03.2020 12:10		04.03.2020 12:16		04.03.2020 12:22		04.03.2020 12:27	
BTEX by EPA 8021B	***Extracted:***	04.11.2020 11:45		04.11.2020 11:45		04.11.2020 11:45		04.11.2020 11:45		04.11.2020 11:45		04.11.2020 11:45	
	Analyzed:	04.12.2020 21:40		04.12.2020 22:00		04.12.2020 22:21		04.12.2020 22:41		04.12.2020 23:01		04.12.2020 23:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00397	0.00397	<0.00399	0.00399	<0.00399	0.00399	<0.00398	0.00398	<0.00400	0.00400
o-Xylene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	04.06.2020 15:40		04.06.2020 15:40		04.06.2020 15:40		04.06.2020 15:40		04.06.2020 15:40		04.06.2020 15:40	
	Analyzed:	04.06.2020 18:08		04.06.2020 18:15		04.07.2020 08:39		04.07.2020 08:46		04.07.2020 08:53		04.06.2020 19:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7050	100	55.6	50.2	43.3	4.99	9.03	5.03	12.1	4.95	146	50.4
TPH by SW8015 Mod	***Extracted:***	04.07.2020 14:00		04.07.2020 14:00		04.07.2020 14:00		04.07.2020 14:00		04.07.2020 14:00		04.08.2020 11:00	
	Analyzed:	04.08.2020 01:19		04.08.2020 01:41		04.08.2020 02:24		04.08.2020 02:46		04.08.2020 03:08		04.08.2020 14:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	<49.8	49.8
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	<49.8	49.8
Total TPH		<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	<49.8	49.8

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Holly Taylor
Project Manager

Certificate of Analysis Summary 657958

Larson and Associates, Inc., Midland, TX

Project Name: Chevron.Gravitas SWD

Project Id: 20-0107-10
Contact: Mark Larson
Project Location:

Date Received in Lab: Mon 04.06.2020 09:20
Report Date: 04.14.2020 10:06
Project Manager: Holly Taylor

Analysis Requested									
	Lab Id:	657958-007		657958-008					
	Field Id:	S-7		S-8					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	04.03.2020 12:34		04.03.2020 12:42					
BTEX by EPA 8021B	***Extracted:***	04.11.2020 11:45		04.11.2020 11:45					
	Analyzed:	04.12.2020 23:42		04.13.2020 00:03					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00200	0.00200				
Toluene		<0.00198	0.00198	<0.00200	0.00200				
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200				
m,p-Xylenes		<0.00397	0.00397	<0.00399	0.00399				
o-Xylene		<0.00198	0.00198	<0.00200	0.00200				
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200				
Total BTEX		<0.00198	0.00198	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	04.06.2020 15:40		04.06.2020 15:40					
	Analyzed:	04.06.2020 19:23		04.06.2020 19:30					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		30.3	24.8	92.6	49.5				
TPH by SW8015 Mod	***Extracted:***	04.08.2020 11:00		04.08.2020 11:00					
	Analyzed:	04.08.2020 14:55		04.08.2020 15:14					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9				
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9				
Total TPH		<50.0	50.0	<49.9	49.9				

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Holly Taylor
Project Manager

Analytical Report 657958

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Chevron.Gravitas SWD

20-0107-10

04.14.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

04.14.2020

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: XENCO Report No(s): **657958**
Chevron.Gravitas SWD
Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 657958. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 657958 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Holly Taylor

Holly Taylor
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Sample Cross Reference 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-1	S	04.03.2020 12:00		657958-001
S-2	S	04.03.2020 12:05		657958-002
S-3	S	04.03.2020 12:10		657958-003
S-4	S	04.03.2020 12:16		657958-004
S-5	S	04.03.2020 12:22		657958-005
S-6	S	04.03.2020 12:27		657958-006
S-7	S	04.03.2020 12:34		657958-007
S-8	S	04.03.2020 12:42		657958-008

CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Chevron.Gravitas SWD

Project ID: *20-0107-10*
Work Order Number(s): *657958*

Report Date: *04.14.2020*
Date Received: *04.06.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3122857 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id: **S-1** Matrix: Soil Date Received:04.06.2020 09:20

Lab Sample Id: 657958-001 Date Collected: 04.03.2020 12:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 04.06.2020 15:40 Basis: Wet Weight

Seq Number: 3122157

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7050**	100	mg/kg	04.06.2020 18:08		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 04.07.2020 14:00 Basis: Wet Weight

Seq Number: 3122297

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.08.2020 01:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.08.2020 01:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.08.2020 01:19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.08.2020 01:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	04.08.2020 01:19	
o-Terphenyl	84-15-1	122	%	70-130	04.08.2020 01:19	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-1**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-001	Date Collected:	04.03.2020 12:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	04.11.2020 11:45	Basis:	Wet Weight
Seq Number:	3122857				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.12.2020 21:40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.12.2020 21:40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.12.2020 21:40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.12.2020 21:40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.12.2020 21:40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.12.2020 21:40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.12.2020 21:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	04.12.2020 21:40	
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.12.2020 21:40	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id: **S-2** Matrix: Soil Date Received:04.06.2020 09:20

Lab Sample Id: 657958-002 Date Collected: 04.03.2020 12:05

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 04.06.2020 15:40 Basis: Wet Weight

Seq Number: 3122157

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**55.6**	50.2	mg/kg	04.06.2020 18:15		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 04.07.2020 14:00 Basis: Wet Weight

Seq Number: 3122297

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.08.2020 01:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.08.2020 01:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.08.2020 01:41	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.08.2020 01:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	04.08.2020 01:41	
o-Terphenyl	84-15-1	120	%	70-130	04.08.2020 01:41	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-2**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-002	Date Collected:	04.03.2020 12:05		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	04.11.2020 11:45	Basis:	Wet Weight
Seq Number:	3122857				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.12.2020 22:00	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.12.2020 22:00	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.12.2020 22:00	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.12.2020 22:00	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.12.2020 22:00	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.12.2020 22:00	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.12.2020 22:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	70-130	04.12.2020 22:00	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.12.2020 22:00	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-3**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-003	Date Collected:	04.03.2020 12:10		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.06.2020 15:40	Basis:	Wet Weight
Seq Number:	3122157				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.3**	4.99	mg/kg	04.07.2020 08:39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	04.07.2020 14:00	Basis:	Wet Weight
Seq Number:	3122297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.08.2020 02:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.08.2020 02:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.08.2020 02:24	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.08.2020 02:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-130	04.08.2020 02:24	
o-Terphenyl	84-15-1	116	%	70-130	04.08.2020 02:24	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-3**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-003	Date Collected:	04.03.2020 12:10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	04.11.2020 11:45	Basis:	Wet Weight
Seq Number:	3122857				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.12.2020 22:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.12.2020 22:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.12.2020 22:21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.12.2020 22:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.12.2020 22:21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.12.2020 22:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.12.2020 22:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	70-130	04.12.2020 22:21	
1,4-Difluorobenzene	540-36-3	109	%	70-130	04.12.2020 22:21	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-4**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-004	Date Collected:	04.03.2020 12:16		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.06.2020 15:40	Basis:	Wet Weight
Seq Number:	3122157				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.03**	5.03	mg/kg	04.07.2020 08:46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	04.07.2020 14:00	Basis:	Wet Weight
Seq Number:	3122297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.08.2020 02:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.08.2020 02:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.08.2020 02:46	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.08.2020 02:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	04.08.2020 02:46	
o-Terphenyl	84-15-1	107	%	70-130	04.08.2020 02:46	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-4**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-004	Date Collected:	04.03.2020 12:16		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	04.11.2020 11:45	Basis:	Wet Weight
Seq Number:	3122857				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.12.2020 22:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.12.2020 22:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.12.2020 22:41	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.12.2020 22:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.12.2020 22:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.12.2020 22:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.12.2020 22:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.12.2020 22:41	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.12.2020 22:41	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id: **S-5** Matrix: Soil Date Received:04.06.2020 09:20

Lab Sample Id: 657958-005 Date Collected: 04.03.2020 12:22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 04.06.2020 15:40 Basis: Wet Weight

Seq Number: 3122157

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.1**	4.95	mg/kg	04.07.2020 08:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 04.07.2020 14:00 Basis: Wet Weight

Seq Number: 3122297

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.08.2020 03:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.08.2020 03:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.08.2020 03:08	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.08.2020 03:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-130	04.08.2020 03:08	
o-Terphenyl	84-15-1	112	%	70-130	04.08.2020 03:08	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-5**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-005	Date Collected:	04.03.2020 12:22		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	04.11.2020 11:45	Basis:	Wet Weight
Seq Number:	3122857				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.12.2020 23:01	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.12.2020 23:01	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.12.2020 23:01	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.12.2020 23:01	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.12.2020 23:01	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.12.2020 23:01	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.12.2020 23:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	04.12.2020 23:01	
1,4-Difluorobenzene	540-36-3	108	%	70-130	04.12.2020 23:01	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-6**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-006	Date Collected:	04.03.2020 12:27		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.06.2020 15:40	Basis:	Wet Weight
Seq Number:	3122157				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**146**	50.4	mg/kg	04.06.2020 19:16		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	04.08.2020 11:00	Basis:	Wet Weight
Seq Number:	3122469				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.08.2020 14:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.08.2020 14:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.08.2020 14:37	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.08.2020 14:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	04.08.2020 14:37	
o-Terphenyl	84-15-1	83	%	70-130	04.08.2020 14:37	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-6**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-006	Date Collected:	04.03.2020 12:27		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	04.11.2020 11:45	Basis:	Wet Weight
Seq Number:	3122857				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.12.2020 23:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.12.2020 23:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.12.2020 23:22	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.12.2020 23:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.12.2020 23:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.12.2020 23:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.12.2020 23:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	04.12.2020 23:22	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.12.2020 23:22	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-7**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-007	Date Collected:	04.03.2020 12:34		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.06.2020 15:40	Basis:	Wet Weight
Seq Number:	3122157				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.3**	24.8	mg/kg	04.06.2020 19:23		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	04.08.2020 11:00	Basis:	Wet Weight
Seq Number:	3122469				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.08.2020 14:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.08.2020 14:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.08.2020 14:55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.08.2020 14:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-130	04.08.2020 14:55	
o-Terphenyl	84-15-1	80	%	70-130	04.08.2020 14:55	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-7**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-007	Date Collected:	04.03.2020 12:34		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	04.11.2020 11:45	Basis:	Wet Weight
Seq Number:	3122857				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.12.2020 23:42	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.12.2020 23:42	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.12.2020 23:42	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.12.2020 23:42	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.12.2020 23:42	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.12.2020 23:42	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.12.2020 23:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.12.2020 23:42	
4-Bromofluorobenzene	460-00-4	126	%	70-130	04.12.2020 23:42	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-8**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-008	Date Collected:	04.03.2020 12:42		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.06.2020 15:40	Basis:	Wet Weight
Seq Number:	3122157				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**92.6**	49.5	mg/kg	04.06.2020 19:30		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	04.08.2020 11:00	Basis:	Wet Weight
Seq Number:	3122469				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.08.2020 15:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.08.2020 15:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.08.2020 15:14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.08.2020 15:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	04.08.2020 15:14	
o-Terphenyl	84-15-1	87	%	70-130	04.08.2020 15:14	

Certificate of Analytical Results 657958

Larson and Associates, Inc., Midland, TX

Chevron.Gravitas SWD

Sample Id:	**S-8**	Matrix:	Soil	Date Received:	04.06.2020 09:20
Lab Sample Id:	657958-008	Date Collected:	04.03.2020 12:42		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	04.11.2020 11:45	Basis:	Wet Weight
Seq Number:	3122857				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.13.2020 00:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.13.2020 00:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.13.2020 00:03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.13.2020 00:03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.13.2020 00:03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.13.2020 00:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.13.2020 00:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	04.13.2020 00:03	
1,4-Difluorobenzene	540-36-3	112	%	70-130	04.13.2020 00:03	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 657958

Larson and Associates, Inc.

Chevron.Gravitas SWD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3122157 — Matrix: Solid — Date Prep: 04.06.2020
MB Sample Id: 7700637-1-BLK — LCS Sample Id: 7700637-1-BKS — LCSD Sample Id: 7700637-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	249	100	249	100	90-110	0	20	mg/kg	04.06.2020 16:32	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3122157 — Matrix: Soil — Date Prep: 04.06.2020
Parent Sample Id: 657957-005 — MS Sample Id: 657957-005 S — MSD Sample Id: 657957-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.03	252	273	108	268	106	90-110	2	20	mg/kg	04.06.2020 16:52	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3122157 — Matrix: Soil — Date Prep: 04.06.2020
Parent Sample Id: 657957-013 — MS Sample Id: 657957-013 S — MSD Sample Id: 657957-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.02	249	272	107	269	106	90-110	1	20	mg/kg	04.06.2020 18:28	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3122297 — Matrix: Solid — Date Prep: 04.07.2020
MB Sample Id: 7700740-1-BLK — LCS Sample Id: 7700740-1-BKS — LCSD Sample Id: 7700740-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1100	110	966	97	70-130	13	20	mg/kg	04.07.2020 21:02	
Diesel Range Organics (DRO)	<50.0	1000	1180	118	1060	106	70-130	11	20	mg/kg	04.07.2020 21:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		118		104		70-130	%	04.07.2020 21:02
o-Terphenyl	128		116		114		70-130	%	04.07.2020 21:02

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3122469 — Matrix: Solid — Date Prep: 04.08.2020
MB Sample Id: 7700811-1-BLK — LCS Sample Id: 7700811-1-BKS — LCSD Sample Id: 7700811-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	812	81	807	81	70-130	1	20	mg/kg	04.08.2020 12:46	
Diesel Range Organics (DRO)	<50.0	1000	888	89	882	88	70-130	1	20	mg/kg	04.08.2020 12:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	82		92		96		70-130	%	04.08.2020 12:46
o-Terphenyl	87		90		91		70-130	%	04.08.2020 12:46

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 657958

Larson and Associates, Inc.

Chevron.Gravitas SWD

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3122297 Matrix: Solid Date Prep: 04.07.2020
MB Sample Id: 7700740-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.07.2020 20:41	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3122469 Matrix: Solid Date Prep: 04.08.2020
MB Sample Id: 7700811-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.08.2020 12:28	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3122297 Matrix: Soil Date Prep: 04.07.2020
Parent Sample Id: 657880-004 MS Sample Id: 657880-004 S MSD Sample Id: 657880-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	965	97	1030	103	70-130	7	20	mg/kg	04.07.2020 22:06	
Diesel Range Organics (DRO)	85.0	997	1100	102	1200	112	70-130	9	20	mg/kg	04.07.2020 22:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		110		70-130	%	04.07.2020 22:06
o-Terphenyl	112		123		70-130	%	04.07.2020 22:06

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3122469 Matrix: Soil Date Prep: 04.08.2020
Parent Sample Id: 658227-041 MS Sample Id: 658227-041 S MSD Sample Id: 658227-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	838	84	934	94	70-130	11	20	mg/kg	04.08.2020 13:41	
Diesel Range Organics (DRO)	<49.9	997	968	97	1080	108	70-130	11	20	mg/kg	04.08.2020 13:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		101		70-130	%	04.08.2020 13:41
o-Terphenyl	82		90		70-130	%	04.08.2020 13:41

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 657958

Larson and Associates, Inc.

Chevron.Gravitas SWD

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3122857 Matrix: Solid Date Prep: 04.11.2020
MB Sample Id: 7701183-1-BLK LCS Sample Id: 7701183-1-BKS LCSD Sample Id: 7701183-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0885	89	0.0920	92	70-130	4	35	mg/kg	04.12.2020 19:17	
Toluene	<0.00200	0.100	0.0956	96	0.0939	94	70-130	2	35	mg/kg	04.12.2020 19:17	
Ethylbenzene	<0.00200	0.100	0.0938	94	0.0905	91	70-130	4	35	mg/kg	04.12.2020 19:17	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.181	91	70-130	4	35	mg/kg	04.12.2020 19:17	
o-Xylene	<0.00200	0.100	0.0979	98	0.0934	93	70-130	5	35	mg/kg	04.12.2020 19:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		103		106		70-130	%	04.12.2020 19:17
4-Bromofluorobenzene	110		105		103		70-130	%	04.12.2020 19:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3122857 Matrix: Soil Date Prep: 04.11.2020
Parent Sample Id: 657958-001 MS Sample Id: 657958-001 S MSD Sample Id: 657958-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0870	87	0.0895	90	70-130	3	35	mg/kg	04.12.2020 19:58	
Toluene	<0.00200	0.0998	0.0888	89	0.0969	97	70-130	9	35	mg/kg	04.12.2020 19:58	
Ethylbenzene	<0.00200	0.0998	0.0863	86	0.0961	96	70-130	11	35	mg/kg	04.12.2020 19:58	
m,p-Xylenes	<0.00399	0.200	0.174	87	0.197	98	70-130	12	35	mg/kg	04.12.2020 19:58	
o-Xylene	<0.00200	0.0998	0.0894	90	0.100	100	70-130	11	35	mg/kg	04.12.2020 19:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		70-130	%	04.12.2020 19:58
4-Bromofluorobenzene	104		112		70-130	%	04.12.2020 19:58

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

№ 1135

657958

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 4/6/2020 PAGE 1 OF 1
PO#: LAB WORK ORDER#:
PROJECT LOCATION OR NAME: Chevron, Gravitas SWD
LAI PROJECT #: 20-0107-10 COLLECTOR: DS

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

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 ☐ / TBLP - 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 ☐ / CHLORIDE ☒ m300 ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 / NaOH	ICE	UNPRESSERVED	BTEX	TRPH 418.1	GASOLINE MOD 8015	DIESEL - MOD 8015	OIL - MOD 8015	CHLORIDE	FIELD NOTES
S-1		4-3-20	1200	S	1				X		X		X	X	X	X	
S-2		″	1205	″	″				″		″		″	″	″	″	
S-3		″	1210	″	″				″		″		″	″	″	″	
S-4		″	1216	″	″				″		″		″	″	″	″	
S-5		″	1222	″	″				″		″		″	″	″	″	
S-6		″	1227	″	″				″		″		″	″	″	″	
S-7		″	1234	″	″				″		″		″	″	″	″	
S-8		″	1242	″	″				″		″		″	″	″	″	

TOTAL 8

RELINQUISHED BY:(Signature) Rachel Owen DATE/TIME 4-6-20 / 9:20 RECEIVED BY: (Signature) [signature]

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 ☒ 5 days

LABORATORY USE ONLY:
RECEIVING TEMP: 3.6 / 3.3 THERM#: R9
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 04.06.2020 09.20.00 AM

Work Order #: 657958

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 04.06.2020

Brianna Teel

Checklist reviewed by: Holly Taylor Date: 04.07.2020

Holly Taylor

Certificate of Analysis Summary 661564

Larson and Associates, Inc., Midland, TX

Project Name: Gravitas SWD,Chevron

Project Id: 20-0107-10
Contact: Mark Larson
Project Location:

Date Received in Lab: Thu 05.14.2020 10:44
Report Date: 05.19.2020 14:14
Project Manager: Holly Taylor

Analysis Requested									
	Lab Id:	661564-001		661564-002					
	Field Id:	SP-9 (0-0.5')		SP-9 (0.5-1')					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	05.13.2020 12:15		05.13.2020 12:16					
BTEX by EPA 8021B	***Extracted:***	05.18.2020 08:00		05.18.2020 08:00					
	Analyzed:	05.18.2020 23:10		05.19.2020 00:29					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00199	0.00199				
Toluene		<0.00198	0.00198	<0.00199	0.00199				
Ethylbenzene		<0.00198	0.00198	<0.00199	0.00199				
m,p-Xylenes		<0.00396	0.00396	<0.00398	0.00398				
o-Xylene		<0.00198	0.00198	<0.00199	0.00199				
Total Xylenes		<0.00198	0.00198	<0.00199	0.00199				
Total BTEX		<0.00198	0.00198	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	05.15.2020 13:30		05.15.2020 13:30					
	Analyzed:	05.16.2020 00:05		05.16.2020 00:11					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		537	25.1	364	24.9				
TPH by SW8015 Mod	***Extracted:***	05.14.2020 17:00		05.14.2020 17:00					
	Analyzed:	05.15.2020 15:52		05.15.2020 16:12					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9				
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9				
Total TPH		<50.0	50.0	<49.9	49.9				

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Holly Taylor
Project Manager

Analytical Report 661564

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Gravitas SWD,Chevron

20-0107-10

05.19.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.19.2020

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: XENCO Report No(s): **661564**
Gravitas SWD,Chevron
Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 661564. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 661564 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Holly Taylor

Holly Taylor
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Sample Cross Reference 661564

Larson and Associates, Inc., Midland, TX

Gravitas SWD,Chevron

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-9 (0-0.5')	S	05.13.2020 12:15		661564-001
SP-9 (0.5-1')	S	05.13.2020 12:16		661564-002

CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Gravitas SWD,Chevron

Project ID: *20-0107-10*
Work Order Number(s): *661564*

Report Date: *05.19.2020*
Date Received: *05.14.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3126361 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Samples affected are: 7703609-1-BLK.

Certificate of Analytical Results 661564

Larson and Associates, Inc., Midland, TX

Gravitas SWD,Chevron

Sample Id:	**SP-9 (0-0.5')**	Matrix:	Soil	Date Received:	05.14.2020 10:44
Lab Sample Id:	661564-001	Date Collected:	05.13.2020 12:15		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.15.2020 13:30	Basis:	Wet Weight
Seq Number:	3126150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**537**	25.1	mg/kg	05.16.2020 00:05		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.2020 17:00	Basis:	Wet Weight
Seq Number:	3126160				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.15.2020 15:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.15.2020 15:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.15.2020 15:52	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.15.2020 15:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-130	05.15.2020 15:52	
o-Terphenyl	84-15-1	105	%	70-130	05.15.2020 15:52	

Certificate of Analytical Results 661564

Larson and Associates, Inc., Midland, TX

Gravitas SWD,Chevron

Sample Id:	**SP-9 (0-0.5')**	Matrix:	Soil	Date Received:	05.14.2020 10:44
Lab Sample Id:	661564-001	Date Collected:	05.13.2020 12:15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	05.18.2020 08:00	Basis:	Wet Weight
Seq Number:	3126361				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.18.2020 23:10	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.18.2020 23:10	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.18.2020 23:10	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	05.18.2020 23:10	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.18.2020 23:10	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.18.2020 23:10	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.18.2020 23:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	05.18.2020 23:10	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.18.2020 23:10	

Certificate of Analytical Results 661564

Larson and Associates, Inc., Midland, TX

Gravitas SWD,Chevron

Sample Id: **SP-9 (0.5-1')** Matrix: Soil Date Received:05.14.2020 10:44

Lab Sample Id: 661564-002 Date Collected: 05.13.2020 12:16

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SPC % Moisture:

Analyst: SPC Date Prep: 05.15.2020 13:30 Basis: Wet Weight

Seq Number: 3126150

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**364**	24.9	mg/kg	05.16.2020 00:11		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 05.14.2020 17:00 Basis: Wet Weight

Seq Number: 3126160

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	05.15.2020 16:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	05.15.2020 16:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.15.2020 16:12	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	05.15.2020 16:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-130	05.15.2020 16:12	
o-Terphenyl	84-15-1	104	%	70-130	05.15.2020 16:12	

Certificate of Analytical Results 661564

Larson and Associates, Inc., Midland, TX

Gravitas SWD,Chevron

Sample Id:	**SP-9 (0.5-1')**	Matrix:	Soil	Date Received:	05.14.2020 10:44
Lab Sample Id:	661564-002	Date Collected:	05.13.2020 12:16		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	05.18.2020 08:00	Basis:	Wet Weight
Seq Number:	3126361				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.19.2020 00:29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.19.2020 00:29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.19.2020 00:29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.19.2020 00:29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.19.2020 00:29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.19.2020 00:29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.19.2020 00:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	70-130	05.19.2020 00:29	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.19.2020 00:29	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 661564

Larson and Associates, Inc.

Gravitas SWD,Chevron

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126150 — Matrix: Solid — Date Prep: 05.15.2020
MB Sample Id: 7703420-1-BLK — LCS Sample Id: 7703420-1-BKS — LCSD Sample Id: 7703420-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	242	97	247	99	90-110	2	20	mg/kg	05.15.2020 21:36	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126150 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661601-001 — MS Sample Id: 661601-001 S — MSD Sample Id: 661601-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.3	252	264	98	260	96	90-110	2	20	mg/kg	05.15.2020 21:53	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126150 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661621-012 — MS Sample Id: 661621-012 S — MSD Sample Id: 661621-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	170	249	416	99	415	98	90-110	0	20	mg/kg	05.15.2020 23:13	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126160 — Matrix: Solid — Date Prep: 05.14.2020
MB Sample Id: 7703367-1-BLK — LCS Sample Id: 7703367-1-BKS — LCSD Sample Id: 7703367-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	934	93	928	93	70-130	1	20	mg/kg	05.15.2020 08:53	
Diesel Range Organics (DRO)	<50.0	1000	897	90	897	90	70-130	0	20	mg/kg	05.15.2020 08:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		117		117		70-130	%	05.15.2020 08:53
o-Terphenyl	107		111		112		70-130	%	05.15.2020 08:53

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126160 — Matrix: Solid — Date Prep: 05.14.2020
MB Sample Id: 7703367-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.15.2020 08:34	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 661564

Larson and Associates, Inc.

Gravitas SWD,Chevron

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126160 Matrix: Soil Date Prep: 05.14.2020
Parent Sample Id: 661563-001 MS Sample Id: 661563-001 S MSD Sample Id: 661563-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	923	93	933	94	70-130	1	20	mg/kg	05.15.2020 09:50	
Diesel Range Organics (DRO)	<49.8	996	903	91	913	92	70-130	1	20	mg/kg	05.15.2020 09:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		119		70-130	%	05.15.2020 09:50
o-Terphenyl	108		108		70-130	%	05.15.2020 09:50

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126361 Matrix: Solid Date Prep: 05.18.2020
MB Sample Id: 7703609-1-BLK LCS Sample Id: 7703609-1-BKS LCSD Sample Id: 7703609-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0989	99	0.119	119	70-130	18	35	mg/kg	05.18.2020 17:29	
Toluene	<0.00200	0.100	0.103	103	0.110	110	70-130	7	35	mg/kg	05.18.2020 17:29	
Ethylbenzene	<0.00200	0.100	0.109	109	0.114	114	70-130	4	35	mg/kg	05.18.2020 17:29	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.212	106	70-130	4	35	mg/kg	05.18.2020 17:29	
o-Xylene	<0.00200	0.100	0.0989	99	0.103	103	70-130	4	35	mg/kg	05.18.2020 17:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		96		101		70-130	%	05.18.2020 17:29
4-Bromofluorobenzene	55	**	124		122		70-130	%	05.18.2020 17:29

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126361 Matrix: Soil Date Prep: 05.18.2020
Parent Sample Id: 661697-011 MS Sample Id: 661697-011 S MSD Sample Id: 661697-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0931	93	0.0841	84	70-130	10	35	mg/kg	05.18.2020 18:28	
Toluene	<0.00199	0.0996	0.0927	93	0.0891	89	70-130	4	35	mg/kg	05.18.2020 18:28	
Ethylbenzene	<0.00199	0.0996	0.0900	90	0.0894	90	70-130	1	35	mg/kg	05.18.2020 18:28	
m,p-Xylenes	<0.00398	0.199	0.166	83	0.164	82	70-130	1	35	mg/kg	05.18.2020 18:28	
o-Xylene	<0.00199	0.0996	0.0822	83	0.0802	80	70-130	2	35	mg/kg	05.18.2020 18:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		102		70-130	%	05.18.2020 18:28
4-Bromofluorobenzene	113		94		70-130	%	05.18.2020 18:28

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

№ 1151

lab1564

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 5/14/2020 PAGE 1 OF 1

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Gravitas SWD, Chevron

LAI PROJECT #: 20-0107-10 COLLECTOR: RO

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

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 ☐	TBLP - 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 NOTES
S-9 (0-0.5')		5/13/20	12:15	S	1				X		X			X	X	X														X		
S-9 (0.5-1')		5/13/20	12:16	S	1				X		X			X	X	X														X		

TOTAL 2

RELINQUISHED BY:(Signature) Rachel Owen DATE/TIME 5-14-20/1033 RECEIVED BY: (Signature)

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: 3.6/3.3 THERM#: R9
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 05.14.2020 10.44.00 AM

Work Order #: 661564

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	BTEX was in bulk container
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**N/A**	
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05.14.2020

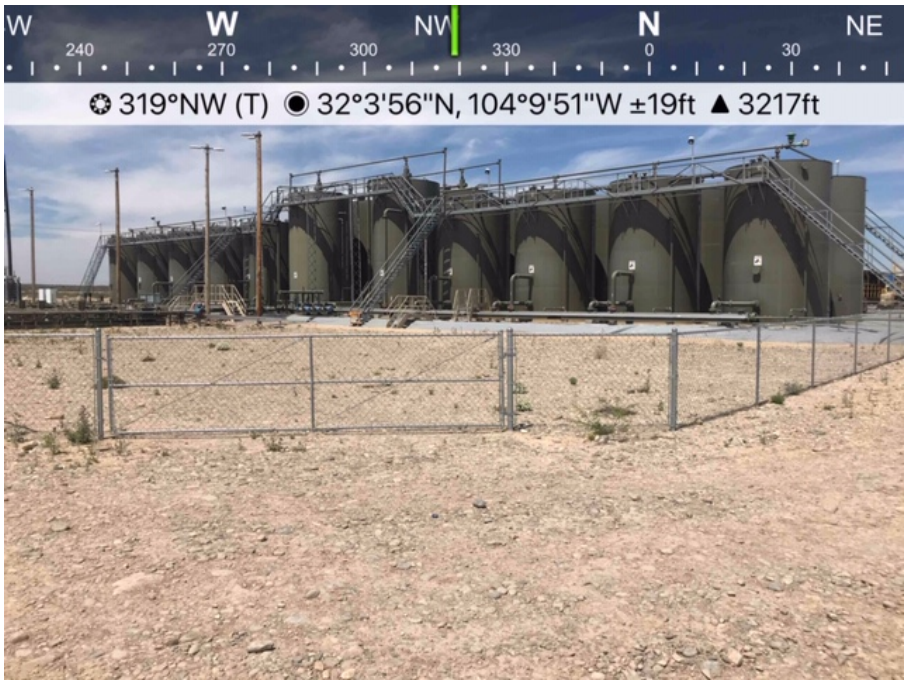
Brianna Teel

Checklist reviewed by: Holly Taylor Date: 05.18.2020

Holly Taylor

Appendix C

Photographs



Spill within lined containment viewing northwest

Spill within lined containment viewing west

Spill within lined containment viewing southwest/west

Spill within lined containment viewing east

Proposed excavation area viewing west