

**State of New Mexico  
Oil Conservation Division**

Incident ID	nRM2004350563
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

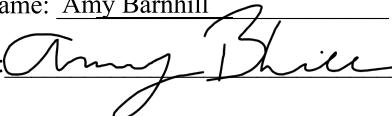
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods,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

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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: Lead Environmental Specialist

Signature:  Date: 1-11-21

email: ABarnhill@chevron.com Telephone: 432-940-8432

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

State of New Mexico  
Oil Conservation Division

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## Remediation Plan

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

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

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

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

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

Printed Name: Amy Barnhill      Title: Lead Environmental Specialist

Signature:  Date: 1-11-21

email: [ABarnhill@chevron.com](mailto:ABarnhill@chevron.com)      Telephone: 432-940-8524

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved       Approved with Attached Conditions of Approval       Denied       Deferral Approved

Signature:  Date: 3/22/2021

State of New Mexico  
Oil Conservation Division

Incident ID	nRM2004350563
District RP	
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Application ID	

## Closure

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 (electronic submittals in .pdf format are preferred) 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.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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.

Printed Name: Amy Barnhill Title: Lead Environmental Specialist

Signature: Amy Barnhill Date: 1-11-21

email: ABarnhill@chevron.com Telephone: 432-940-8524

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Karen Collins Date: 3/24/2021

Printed Name: Karen Collins Title: Environmental Scientist & Specialist

**Tracking Number: nRM2004350563**  
**Closure Report**  
**Skeen 2 26 27 State #002H Pumping Unit**  
**Produced Water and Crude Oil Release**  
**Eddy County, New Mexico**

Latitude: N 32.078476°  
Longitude: W -104.1631546°

LAI Project No. 20-0107-03

December 29, 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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Appendix B	Boring Log
Appendix C	Karst Risk Potential
Appendix D	Laboratory Reports
Appendix E	Waste Manifests
Appendix F	Photographs

## 1.0 INTRODUCTION

Larson & Associates, Inc. (LAI), has prepared this delineation report and remediation plan is submitted to the New Mexico Oil Conservation Division (OCD) District 2 on behalf of Chevron USA Inc. (Chevron) for a crude oil and produced water release at Skeen 2 26 27 State #002H (Site) located in Unit C (NE/4, NW/4), Section 2, Township 26 South, Range 27 East, in Eddy County New Mexico. The geodetic position is North 32.078476° and West -104.1631546°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

### 1.1 Background

The release was discovered on January 27, 2020, due to equipment failure. Chevron reported that approximately 2.3 barrels (bbls) of crude oil and 2.95 bbls of produced water were released. Approximately 2 bbls of crude oil and 2.95 bbls of produced water were recovered. The affected area measures approximately 2,598 square feet. Appendix A presents initial Chevron spill documentation and initial C-141. The OCD assigned the release incident number of nRM2004350563.

### 1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,212 feet above mean sea level (msl).
- The surface topography slopes gradually to the southeast.
- There are no surface water features within 1,000 feet of the Site.
- Karst Data provided by the USGS describes the Site as “High Risk” potential.
- The soils are designated “Reeves-Gypsum land complex, 0 to 3 percent slopes” consisting of 8 inches of loam, underlain by 24 inches of clay loam, and 28 inches of gypsiferous material, in descending order.
- The upper geological unit is the Rustler Formation (Upper Permian) consisting of 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 installing a boring (BH-1) on April 29, 2020.

Appendix B presents karst potential map. Appendix C presents the boring log. Figure 4 presents the boring hole location.

### 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 February 20, March 17, and May 13, 2020, LAI personnel used a stainless-steel hand auger to collect soil samples from eleven (11) locations (SP-1 through SP-11) inside of the spill area and in each cardinal direction of the spill (north, south, east, and west) to delineate the release vertically and horizontally. The samples were collected to approximately 0.5 and 1.0 feet below ground surface (bgs). The soil samples were delivered under chain of custody and preservation to Xenco Laboratories 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 and BTEX were below the analytical method reporting limits and OCD remediation levels of 10 milligrams per kilogram (mg/Kg) and 50 mg/Kg, respectively, in all samples. Chloride and TPH exceeded the surface restoration limit (19.15.29.13 NMAC) of 600 mg/Kg and 100 mg/Kg, respectively, in the following samples:

Sample ID, Depth (Feet)	TPH (mg/Kg)	Chloride (mg/Kg)
S-1, 0 to 0.5	523	3,210
S-1, 0.5 to 1	237	3,360
S-2, 0 to 0.5	411	4,230
S-2, 0.5 to 1	753	4,290
S-3, 0 to 0.5	694	1,020
S-3, 0.5 to 1	795	677
S-4, 0 to 0.5	457	820
S-4, 0.5 to 1	663	1,050
S-6, 0 to 0.5	--	916
S-6, 0.5 to 1	--	657
S-7, 0 to 0.5	517	--
S-7, 0.5 to 1	--	877
S-8, 0 to 0.5	103	--

On March 17 and 18, 2019, LAI personnel used direct push technology (DPT) to further delineate the release. Soil samples were collected at 2, 3, 5 and 10 feet bgs, depending on subsurface conditions. The samples were delivered under chain of custody and preservation to Xenco and were analyzed for BTEX, TPH, and chloride by EPA SW-846 Methods 8021B and 8015M, and M300, respectively. TPH and chloride were delineated below the remediation limits of 100 mg/Kg and 600 mg/Kg, respectively, at all sample locations. Table 1 presents the soil sample analytical data summary. Appendix B presents the laboratory reports.

### 3.0 REMEDIATION

On November 17, 2020, P2 Construction, Inc. (P2) under supervision from LAI excavated soil from the crude oil and produced water release encompassing sample locations SP-1 through SP-4 and SP-6 through SP-8, measuring approximately 3,488 square feet. Soil was excavated to approximately one (1) foot bgs. Approximately 160 cubic yards of contaminated soil was stockpiled on a liner adjacent to the excavation prior to being hauled to the R360 Red Bluff disposal facility located approximately 13 miles northwest of Orla, Texas. On November 24, 2020, LAI personnel collected ten (10) confirmation soil samples from the bottom and sidewalls of the excavation. The soil samples were delivered under chain of custody and preservation to Xenco Laboratories (Xenco) in Carlsbad, New Mexico. The laboratory analyzed the samples for BTEX, TPH, and chloride by EPA SW-846 Methods 8021B, 8015M, and 300E, respectively. All confirmation soil samples reported benzene and BTEX below the OCD remediation levels. Chloride and TPH were reported above OCD remediation levels in the following confirmation sample:

Sample ID	Location	Depth (Feet)	TPH (mg/Kg)	Chloride (mg/Kg)
C-5	Bottom	1	216	1,300

On December 14, 2020, P2 excavated approximately one (1) foot of soil from the bottom of the excavation encompassing sample location C-5. Approximately 18 cubic yards of impacted material was removed and hauled to the R360 Red Bluff disposal facility. A subsequent confirmation soil sample reported TPH and chloride below the OCD remediation levels.

LAI personnel collected one (1) composite sample of clean caliche from a nearby State of New Mexico borrow pit. Benzene, BTEX, and TPH were below the analytical method reporting limit and chloride was less than 600 mg/Kg in the backfill composite sample. On December 28, 2020, the excavation was backfilled to ground surface with clean caliche. Table 2 presents the confirmation soil analytical data summary. Figure 3 presents the excavations and confirmation sample locations. Appendix D presents the laboratory reports. Appendix E presents the waste manifests. Appendix F presents photographic documentation.

### 4.0 CLOSURE REQUEST

Chevron USA requests no further action for this release.

## **Tables**

**Table 1**  
**Soil Sample Analytical Data Summary**

Skeen 2H

Eddy County, New Mexico

North 32° 04' 42.83", West 104° 09' 47.46"

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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)	100 / 10,000
<b>Remediation Level:</b>											
<b>S-1</b>	0 - 0.5	2/20/2020	In-Situ	<0.00202	<0.00202	<50.0	468	55.2	<b>523</b>	<b>3,210</b>	
	0.5 - 1	2/20/2020	In-Situ	<0.00200	<0.00200	<50.0	237	<50.0	<b>237</b>	<b>3,360</b>	
2	3/17/2020	In-Situ	--	--	--	<50.0	<50.0	<50.0	<50.0	123	
3	3/17/2020	In-Situ	--	--	--	<49.8	<49.8	<49.8	<49.8	7.00	
5	3/17/2020	In-Situ	--	--	--	<50.0	<50.0	<50.0	<50.0	5.88	
10	3/17/2020	In-Situ	--	--	--	<49.9	<49.9	<49.9	<49.9	29.5	
<b>S-2</b>	0 - 0.5	2/20/2020	In-Situ	<0.00200	0.07550	<50.0	411	<50.0	<b>411</b>	<b>4,230</b>	
	0.5 - 1	2/20/2020	In-Situ	<0.00200	0.02440	<49.8	681	71.5	<b>753</b>	<b>4,290</b>	
2	3/18/2020	In-Situ	--	--	--	<50.0	<50.0	<50.0	<50.0	591	
3	3/18/2020	In-Situ	--	--	--	<49.9	<49.9	<49.9	<49.9	373	
5	3/18/2020	In-Situ	--	--	--	<49.8	<49.8	<49.8	<49.8	344	
8	3/18/2020	In-Situ	--	--	--	<50.0	<50.0	<50.0	<50.0	261	
<b>S-3</b>	0 - 0.5	2/20/2020	In-Situ	<0.00200	<0.00200	<49.9	614	79.9	<b>694</b>	<b>1,020</b>	
	0.5 - 1	2/20/2020	In-Situ	<0.00200	<0.00200	<50.0	711	84	<b>795</b>	<b>677</b>	
2	3/18/2020	In-Situ	--	--	--	<50.0	<50.0	<50.0	<50.0	323	
5	3/18/2020	In-Situ	--	--	--	<49.9	<49.9	<49.9	<49.9	95.4	
8	3/18/2020	In-Situ	--	--	--	<49.8	<49.8	<49.8	<49.8	19.6	
10	3/18/2020	In-Situ	--	--	--	<49.8	<49.8	<49.8	<49.8	14.6	
<b>S-4</b>	0 - 0.5	2/20/2020	In-Situ	<0.00202	<0.00202	<49.8	404	52.5	<b>457</b>	<b>820</b>	
	0.5 - 1	2/20/2020	In-Situ	<0.00199	<0.00199	<50.0	597	66.3	<b>663</b>	<b>1,050</b>	
2	3/17/2020	In-Situ	--	--	--	<49.9	<49.9	<49.9	<49.9	114	
3	3/17/2020	In-Situ	--	--	--	<50.0	<50.0	<50.0	<50.0	43.8	

**Table 1**  
**Soil Sample Analytical Data Summary**

Skeen 2H

Eddy County, New Mexico

North 32° 04' 42.83", West 104° 09' 47.46"

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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)	100 / 2,500	600 / 10,000
<b>Remediation Level:</b>												
	5 7.5	3/17/2020 3/17/2020	In-Situ In-Situ	-- --	-- --	<49.9 <50.0	<49.9 <50.0	<49.9 <50.0	<49.9 <50.0	<49.9 <50.0	61.3 40.1	
<b>S-5</b>	0 - 0.5 0.5 - 1	2/20/2020 2/20/2020	In-Situ In-Situ	<0.00198 <0.00200	<0.00198 <0.00200	<50.0 <49.9	<50.0 <49.9	<50.0 <49.9	<50.0 <49.9	<50.0 <49.9	126 151	
<b>S-6</b>	0 - 0.5 0.5 - 1 2 4 5 8	2/20/2020 2/20/2020 3/17/2020 3/17/2020 3/17/2020 3/17/2020	In-Situ In-Situ In-Situ In-Situ In-Situ In-Situ	<0.00198 <0.00198 -- -- -- --	<0.00198 <0.00198 -- -- -- --	<49.9 <49.8 -- -- -- --	<49.9 <49.8 -- -- -- --	<49.9 <49.8 -- -- -- --	<49.9 <49.8 -- -- -- --	<49.9 <49.8 -- -- -- --	<b>916</b> <b>657</b> 387 98.3 307 475	
<b>S-7</b>	0 - 0.5 0.5 - 1 2 3 5 7.5	2/20/2020 2/20/2020 3/17/2020 3/17/2020 3/17/2020 3/17/2020	In-Situ In-Situ In-Situ In-Situ In-Situ In-Situ	<0.00199 <0.00200 -- -- -- --	<0.00199 <0.00200 -- -- -- --	<50.0 <50.0 -- -- -- --	455 60.7 -- -- -- --	62.2 60.7 -- -- -- --	<b>517</b> <b>877</b> 504 60.7	504 877 478 61.6 <4.95 <4.95		
<b>S-8</b>	0 - 0.5 0.5 - 1	2/20/2020 2/20/2020	In-Situ In-Situ	<0.00200 <0.00199	<0.00200 <0.00199	<49.9 <50.0	103 <50.0	<49.9 <50.0	<49.9 <50.0	<49.9 <50.0	152 111	
<b>S-9</b>	0 - 0.5 0.5 - 1	3/17/2020 3/17/2020	In-Situ In-Situ	<0.00198 <0.00199	<0.00198 <0.00199	<49.9 <49.8	<49.9 <49.8	<49.9 <49.8	<49.9 <49.8	<49.9 <49.8	<5.03 <5.05	

**Table 1**  
**Soil Sample Analytical Data Summary**

Skeen 2H

Eddy County, New Mexico

North 32° 04' 42.83", West 104° 09' 47.46"

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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)
<b>Remediation Level:</b>										
S-10	0 - 0.5 0.5 - 1	3/17/2020 3/17/2020	In-Situ In-Situ	<0.00198 <0.00200	<0.00198 <0.00200	<50.0 <49.9	<50.0 <49.9	<50.0 <50.0	<50.0 <49.9	<50.0 <49.9
S-11	0 - 0.5 0.5 - 1	5/13/2020 5/13/2020	In-Situ In-Situ	<0.00202 <0.00200	<0.00202 <0.00200	<50.0 <50.0	<50.0 <50.0	<50.0 <50.0	<50.0 <50.0	26.5 18.0

Notes: Analysis performed by Xenco Laboratories in Midland, TX

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**

**Bold and Highlighted exceeds OCD delineation limits**

**Table 2**  
**Confirmation Soil Sample Analytical Data Summary**

**Chevron USA, Skeen 2H**

**Eddy County, New Mexico**

**North 32°04'42.83", West 104°09'47.46"**

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)
RAI:					10	50				100	600
<b>SW-N</b>	Sidewall	0 - 1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	116
<b>SW-E</b>	Sidewall	0 - 1	11/24/2020	In-Situ	<0.00200	<0.00200	61.9	<49.8	<49.8	61.9	289
<b>SW-W</b>	Sidewall	0 - 1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	253
<b>SW-S</b>	Sidewall	0 - 1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	22.1
<b>C-1</b>	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	180
<b>C-2</b>	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	184
<b>C-3</b>	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	359
<b>C-4</b>	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	128
<b>C-5</b>	Bottom	1	11/24/2020	In-Situ	<0.00200	<0.00200	<49.9	216	<49.9	<b>216</b>	<b>1,300</b>
<b>C-6</b>	Bottom	2	12/14/2020	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	304
		1	11/24/2020	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	216
<b>Backfill Caliche 1</b>	--	--	11/23/2020	In-Situ	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<49.9

Notes: analysis performed by Xenco Laboratories (Xenco), Midland, Texas and Carlsbad, New Mexico by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and Method 300 (chloride)  
 Depth in feet below ground surface (bgs)  
 mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

**Bold and Highlighted Denotes Concentrations Above OCD Closure Criteria**

## **Figures**

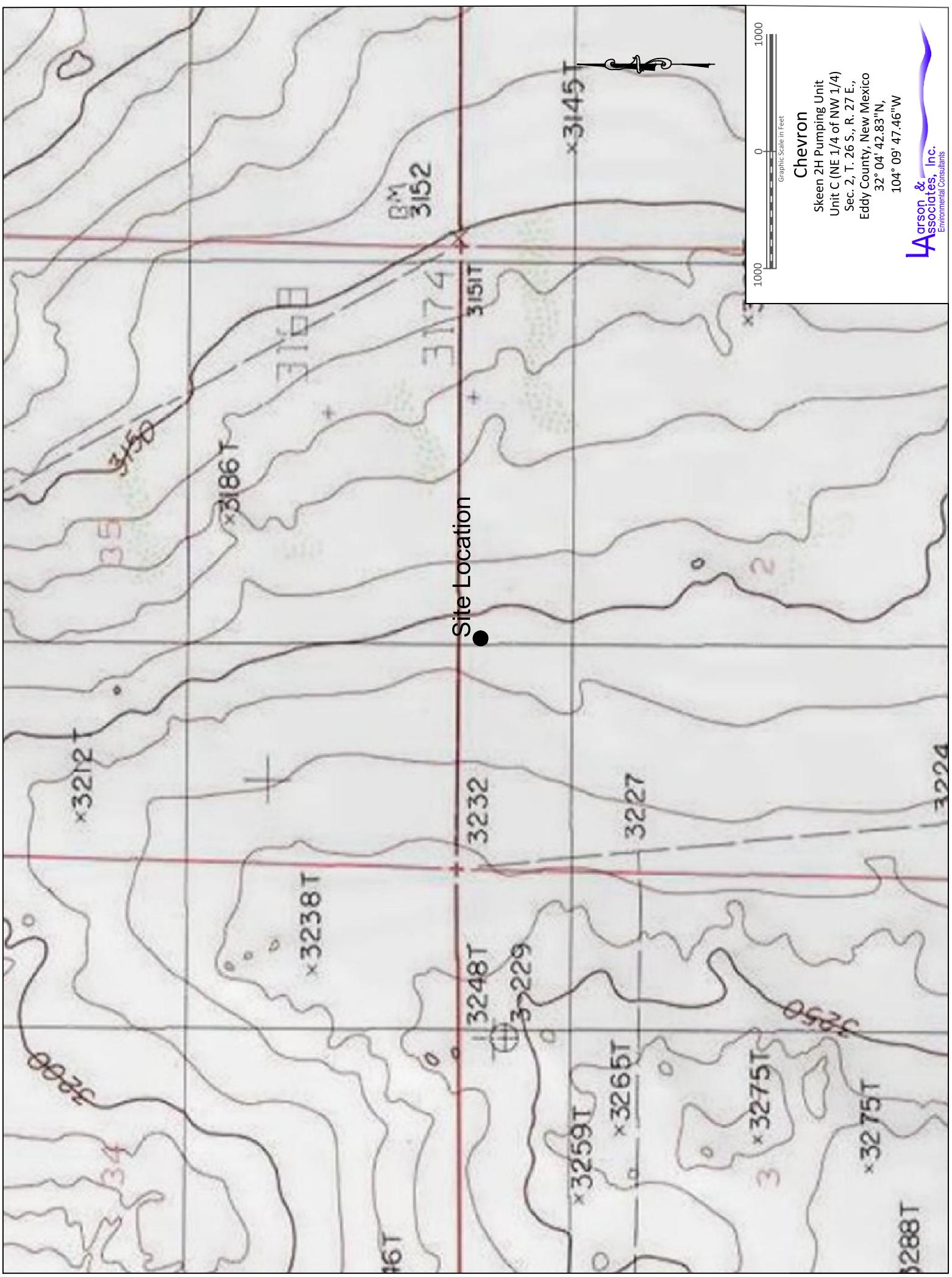


Figure 1 - Topographic Map



Figure 2 - Aerial Map

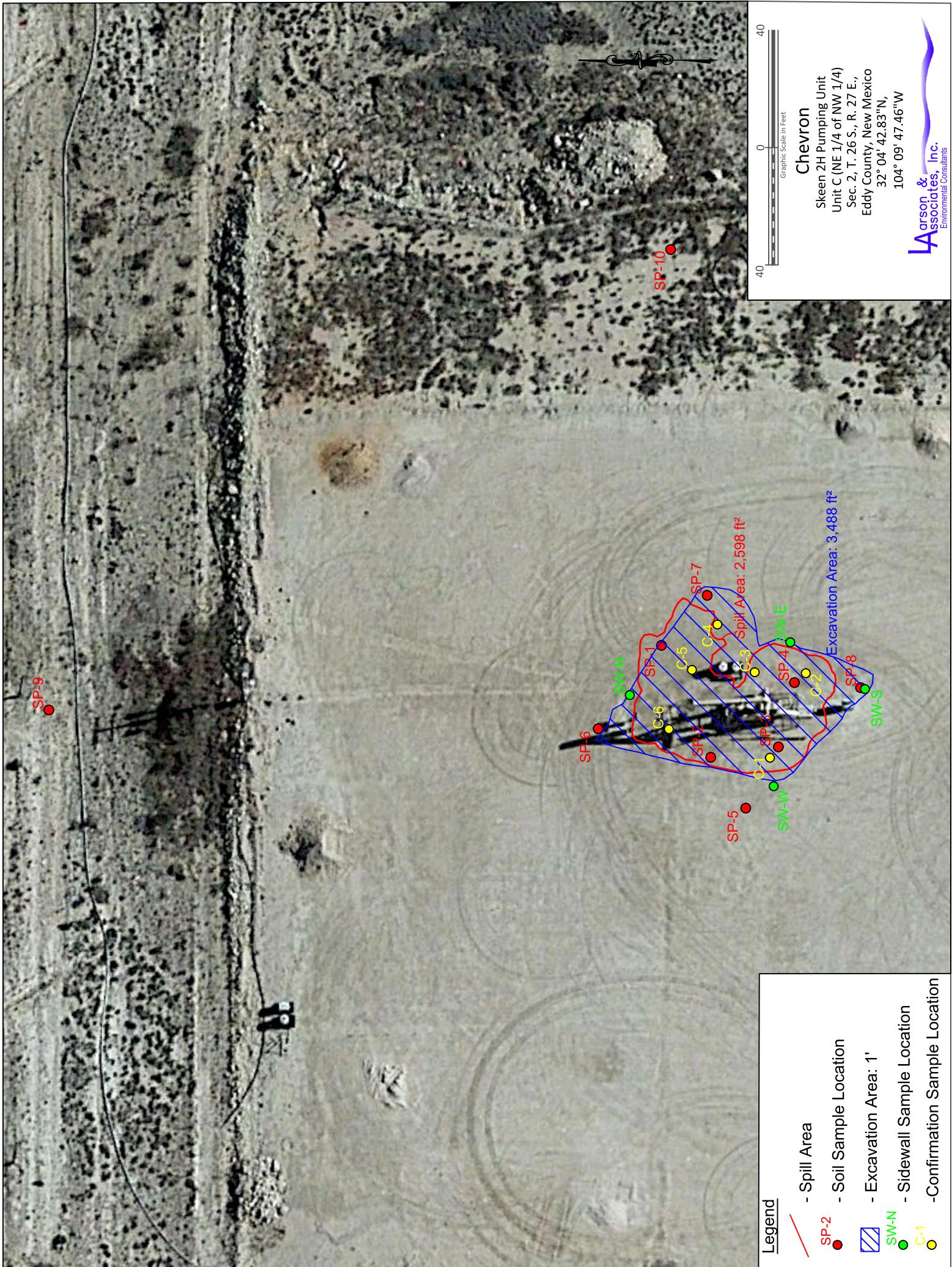


Figure 3 - Aerial Map Showing Excavation Location

Site Location



BH-1



Legend

- Boring Hole Location

400  
0  
400

Graphic Scale in Feet

Chevron

Skeen 2H Pumping Unit  
Unit C (NE 1/4 of NW 1/4)  
Sec. 2, T. 26 S., R. 27 E.,  
Eddy County, New Mexico

32° 04' 42.83" N,  
104° 09' 47.46" W

**Larson & Associates, Inc.**  
Environmental Consultants

Figure 4 - Aerial Map Showing Boring Hole Location

**Appendix A**

**Chevron Spill Calculation**

State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Incident Date		1/28/2020			
Incident Time		Start Time	End Time		
		7:55 AM	8:00 AM		
Location		Skeen 2H Pumping Unit			
Area	Standing Liquid	In Soil	size	Oil Volume	Water Volume
1	0.1667	0.26	15 X 3.14	2.3	2.95
2					
3					
4					
5					
		Total Fluid	2.3	2.95	
1	Fluid Recovered		Oil Volume	Water Volume	
			2	2.95	

**Appendix B**

**Boring Log**

**BORING RECORD**

GEOLOGIC UNIT	DEPTH	Start: 11:30 Finish: 12:30 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING									SAMPLE			REMARKS												
					PPM X 1									NUMBER	PID READING	RECOVERY	DEPTH	BACKGROUND PID READING											
Depth to Water: 25.25	0	Silty Sand, 7.5YR 8/2, Pinkish White, Rounded, Fine Grained, Poorly Sorted, Subangular, 0.5-2cm Clast Inclusions	ML		PPM X 1									1															
	5	Caliche, 7.5YR 8/1, White, Rounded, Poorly Sorted, Medium Grained, Subangular, 0.5-1cm Diameter Clast Inclusions			PPM X 1									5															
	10	Caliche, 7.5YR 8/1, White, Rounded, Poorly Sorted, Medium Grained, Subangular, 0.5-1cm Diameter Clast Inclusions			PPM X 1									10															
	15	Silty Sand, 7.5YR 6/6, Reddish Yellow, Rounded, Fine Grained, Poorly Sorted, Subangular, 0.5-1cm Diameter Clast Inclusions			PPM X 1									15															
	20	Silty Sand, 7.5YR 6/8, Reddish Yellow, Subangular, 0.5-2.5cm Diameter Clast Inclusions			PPM X 1									20															
	25	Quartz Sand, 2.5YR 8/2, Pinkish White, Fine Grained, Rounded, Poorly Sorted, Subangular, 0.5-2.5cm Diameter Clast Inclusions			PPM X 1									25															
	30	Quartz Sand, 2.5YR 8/2, Pinkish White, Fine Grained, Rounded, Poorly Sorted, Subangular, 0.5-2cm Clast Inclusions	SM		PPM X 1									30															
	35	Quartz Sand, Very Fine Grained, Well Rounded, Poorly Sorted, 7.5YR 8/1, White, Subangular Clast Inclusions, 0.5-1.5cm Diameter			PPM X 1									35															
	40	Quartz Sand, Very Fine Grained, Well Rounded, Poorly Sorted, 7.5YR 8/1, White, Subangular Clast Inclusions, 0.5-1.5cm Diameter			PPM X 1									40															
	45	Quartz Sand, Very Fine Grained, Well Rounded, Poorly Sorted, 7.5YR 8/1, White, Subangular Clast Inclusions, 0.5-1.5cm Diameter			PPM X 1									45															
	50	Quartz Sand, Very Fine Grained, Well Rounded, Poorly Sorted, 7.5YR 8/1, White, Subangular Clast Inclusions, 0.5-1.5cm Diameter			PPM X 1									50															
<input type="checkbox"/> ONE CONTINUOUS AUGER SAMPLER <input type="checkbox"/> STANDARD PENETRATION TEST <input type="checkbox"/> UNDISTURBED SAMPLE  WATER TABLE ( 24 HRS )	 WATER TABLE ( TIME OF BORING )  LABORATORY TEST LOCATION  PENETROMETER (TONS/ SQ. FT )  NO RECOVERY	JOB NUMBER : <u>Chevron/ 20-0107-03</u> HOLE DIAMETER : <u>2"</u> LOCATION : <u>Skeen 2H - Carlsbad, NM</u> LAI GEOLOGIST : <u>R. Nelson</u> DRILLING CONTRACTOR : <u>SDI</u> DRILLING METHOD : <u>Air Rotary</u>																											
	DRILL DATE : <u>04-29-2020</u>	BORING NUMBER : <u>BH-1</u>																											

## BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 11:30 Finish: 12:30 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING													SAMPLE		REMARKS	
					PPM X 1													NUMBER	PID READING	RECOVERY	DEPTH
																				SOIL : _____ PPM	SOIL : _____ PPM
	55																				
	60		SM																60		
	65	Silty Sand, 18YR 6/5, Pale Brown, Rounded, Fine Grained, Moderately Sorted, Subangular, 0.5-1cm Diameter Inclusions	ML																65		
	70		ML																70		
	75		ML																75		
	80	2.5YR, Pink, Very Fine Grained, Well Rounded, Well Sorted, Subangular, 0.5-1cm Diameter Clast Inclusions	ML																80		
	85		ML																85		
	90		ML																90		
	95	TD: 95'																	95		
	100																		100		
	105																		105		

 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

JOB NUMBER : Chevron/ 20-0107-03  
HOLE DIAMETER : 2"  
LOCATION : Skeen 2H - Carlsbad, NM  
LAI GEOLOGIST : R. Nelson  
DRILLING CONTRACTOR : SDI  
DRILLING METHOD : Air Rotary

DRILL DATE : 04-29-2020BORING NUMBER : BH-1

**Appendix C**

**Karst Risk Potential**



abc

abc

abc

abc

ab

**Appendix D**

**Laboratory Reports**



# Certificate of Analysis Summary 653356

## Larson and Associates, Inc., Midland, TX

**Project Id:** 20-0107-03  
**Contact:** Mark Larson  
**Project Location:** NM

**Project Name:** Skeen 2H Pumping Unit  
**Date Received in Lab:** Fri Feb-21-20 03:47 pm  
**Report Date:** 02-MAR-20  
**Project Manager:** Holly Taylor

<b>Analysis Requested</b>		<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	653356-001 S-1 (0-0.5) 0.5-1 ft SOIL	653356-002 S-2 (0-0.5) 0.5-1 ft SOIL	653356-003 S-2 (0.5-1) 0.5-1 ft SOIL	653356-004 S-2 (0-0.5) 0-0.5 ft SOIL	653356-005 S-3 (0-0.5) 0-0.5 ft SOIL	653356-006 S-3 (0.5-1) 0.5-1 ft SOIL
<i>Extracted:</i>	<i>Analyzed:</i>	<i>Units/RL:</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
BTEX by EPA 8021B	Extracted: Feb-29-20 08:30 Analyzed: Feb-29-20 14:03	mg/kg RL	Feb-29-20 08:30 Feb-29-20 14:23	Feb-29-20 08:30 Feb-29-20 14:43	Feb-29-20 08:30 Feb-29-20 15:03	Feb-29-20 08:30 Feb-29-20 15:23	Feb-29-20 08:30 Feb-29-20 15:43	Feb-29-20 08:30 Feb-29-20 11:47
Benzene	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes	<0.00403 0.00403	<0.00399 0.00399	0.0536 0.00401	0.0203 0.00401	0.0203 0.00401	<0.03399 0.00399	<0.03399 0.00399	<0.04400 0.00400
o-Xylene	<0.00202 0.00202	<0.00200 0.00200	<0.0182 0.00200	0.00412 0.00200	0.00412 0.00200	<0.0200 0.00200	<0.0200 0.00200	<0.0200 0.00200
Total Xylenes	<0.00202 0.00202	<0.00200 0.00200	<0.0718 0.00200	0.0244 0.00200	0.0244 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX	<0.00202 0.00202	<0.00200 0.00200	<0.0755 0.00200	0.0244 0.00200	0.0244 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
<b>Chloride by EPA 300</b>	<i>Extracted:</i> Feb-24-20 12:40 <i>Analyzed:</i> Feb-24-20 13:45	<i>Units/RL:</i> <i>mg/kg</i> RL	Feb-24-20 12:40 Feb-24-20 13:51	Feb-24-20 12:40 Feb-24-20 13:58	Feb-24-20 12:40 Feb-24-20 14:04	Feb-24-20 12:40 Feb-24-20 14:23	Feb-24-20 12:40 Feb-24-20 14:29	Feb-24-20 12:40 Feb-24-20 14:29
Chloride	3210	49.7	3360 49.9	4230 50.2	4290 49.8	1020 49.7	677 24.9	RL
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i> Feb-24-20 13:00 <i>Analyzed:</i> Feb-24-20 14:36	<i>Units/RL:</i> <i>mg/kg</i> RL	Feb-24-20 13:00 Feb-24-20 15:38	Feb-24-20 13:00 Feb-24-20 15:59	Feb-24-20 13:00 Feb-24-20 16:20	Feb-24-20 13:00 Feb-24-20 16:41	Feb-24-20 13:00 Feb-24-20 17:02	Feb-24-20 13:00 Feb-24-20 17:02
Gasoline Range Hydrocarbons	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	RL
Diesel Range Organics	468 50.0	237 50.0	411 50.0	681 49.8	614 49.9	711 50.0		
Oil Range Hydrocarbons	55.2 50.0	<50.0 50.0	<50.0 50.0	71.5 49.8	79.9 49.9	84.0 50.0		
Total TPH	523 50.0	237 50.0	411 50.0	753 49.8	694 49.9	795 50.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data thereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Holly Taylor  
Project Manager



# Certificate of Analysis Summary 653356

**Larson and Associates, Inc., Midland, TX**

**Project Id:** 20-0107-03  
**Contact:** Mark Larson  
**Project Location:** NM

**Project Name:** Skeen 2H Pumping Unit  
**Date Received in Lab:** Fri Feb-21-20 03:47 pm  
**Report Date:** 02-MAR-20  
**Project Manager:** Holly Taylor

<i>Analysis Requested</i>		<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	653356-007 S-4 (0-0.5) 0-0.5 ft SOIL	653356-008 S-5 (0-0.5) 0-0.5 ft SOIL	653356-009 S-5 (0-0.5) 0-0.5 ft SOIL	653356-010 S-6 (0-0.5) 0-0.5 ft SOIL	653356-011 S-6 (0-0.5) 0-0.5 ft SOIL	653356-012 S-6 (0-0.5) 0-0.5 ft SOIL
<i>Extracted:</i>	<i>Analyzed:</i>	<i>Units/RL:</i>	Feb-29-20 08:30 mg/kg RL					
BTEX by EPA 8021B			Feb-29-20 11:36 mg/kg RL	Feb-20-20 11:38 mg/kg RL	Feb-20-20 11:50 mg/kg RL	Feb-20-20 11:53 mg/kg RL	Feb-20-20 12:02 mg/kg RL	Feb-20-20 12:07 mg/kg RL
Benzene	Extracted:	Feb-29-20 08:30 <0.00202 0.00202	Feb-29-20 16:03 <0.00199 0.00199	Feb-29-20 16:24 <0.00199 0.00199	Feb-29-20 17:04 <0.00198 0.00198	Feb-29-20 18:23 <0.00200 0.00200	Feb-29-20 08:30 <0.00198 0.00198	Feb-29-20 08:30 <0.00198 0.00198
Toluene	Extracted:	Feb-29-20 08:30 <0.00202 0.00202	Feb-29-20 16:03 <0.00199 0.00199	Feb-29-20 16:24 <0.00199 0.00199	Feb-29-20 17:04 <0.00198 0.00198	Feb-29-20 18:23 <0.00200 0.00200	Feb-29-20 08:30 <0.00198 0.00198	Feb-29-20 08:30 <0.00198 0.00198
Ethylbenzene	Extracted:	Feb-29-20 08:30 <0.00202 0.00202	Feb-29-20 16:03 <0.00199 0.00199	Feb-29-20 16:24 <0.00199 0.00199	Feb-29-20 17:04 <0.00198 0.00198	Feb-29-20 18:23 <0.00200 0.00200	Feb-29-20 08:30 <0.00198 0.00198	Feb-29-20 08:30 <0.00198 0.00198
m,p-Xylenes	Extracted:	Feb-29-20 08:30 <0.00403 0.00403	Feb-29-20 16:03 <0.00199 0.00199	Feb-29-20 16:24 <0.00398 0.00398	Feb-29-20 17:04 <0.00397 0.00397	Feb-29-20 18:23 <0.00399 0.00399	Feb-29-20 08:30 <0.00397 0.00397	Feb-29-20 08:30 <0.00397 0.00397
o-Xylene	Extracted:	Feb-29-20 08:30 <0.00202 0.00202	Feb-29-20 16:03 <0.00199 0.00199	Feb-29-20 16:24 <0.00199 0.00199	Feb-29-20 17:04 <0.00198 0.00198	Feb-29-20 18:23 <0.00200 0.00200	Feb-29-20 08:30 <0.00198 0.00198	Feb-29-20 08:30 <0.00198 0.00198
Total Xylenes	Extracted:	Feb-29-20 08:30 <0.00202 0.00202	Feb-29-20 16:03 <0.00199 0.00199	Feb-29-20 16:24 <0.00199 0.00199	Feb-29-20 17:04 <0.00198 0.00198	Feb-29-20 18:23 <0.00200 0.00200	Feb-29-20 08:30 <0.00198 0.00198	Feb-29-20 08:30 <0.00198 0.00198
Total BTEX	Extracted:	Feb-29-20 08:30 <0.00202 0.00202	Feb-29-20 16:03 <0.00199 0.00199	Feb-29-20 16:24 <0.00199 0.00199	Feb-29-20 17:04 <0.00198 0.00198	Feb-29-20 18:23 <0.00200 0.00200	Feb-29-20 08:30 <0.00198 0.00198	Feb-29-20 08:30 <0.00198 0.00198
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Feb-24-20 12:40 mg/kg RL	Feb-24-20 12:40 mg/kg RL	Feb-24-20 12:40 mg/kg RL	Feb-24-20 12:40 mg/kg RL	Feb-24-20 12:40 mg/kg RL	Feb-24-20 12:40 mg/kg RL	Feb-24-20 12:40 mg/kg RL
Chloride	<i>Extracted:</i>	Feb-24-20 14:35 mg/kg RL	Feb-24-20 14:41 mg/kg RL	Feb-24-20 14:48 mg/kg RL	Feb-24-20 15:13 mg/kg RL	Feb-24-20 15:19 mg/kg RL	Feb-24-20 15:19 mg/kg RL	Feb-24-20 15:19 mg/kg RL
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Feb-24-20 13:00 mg/kg RL	Feb-24-20 13:00 mg/kg RL	Feb-24-20 13:00 mg/kg RL	Feb-24-20 13:00 mg/kg RL	Feb-24-20 13:00 mg/kg RL	Feb-24-20 13:00 mg/kg RL	Feb-24-20 13:00 mg/kg RL
Gasoline Range Hydrocarbons	Extracted:	Feb-24-20 17:23 <49.8	Feb-24-20 17:44 49.8	Feb-24-20 18:05 <50.0	Feb-24-20 18:26 50.0	Feb-24-20 18:26 <49.9	Feb-24-20 19:08 49.9	Feb-24-20 19:08 49.9
Diesel Range Organics	Extracted:	404	49.8	597	50.0	<50.0	49.9	49.9
Oil Range Hydrocarbons	Extracted:	52.5	49.8	66.3	50.0	<50.0	49.9	49.9
Total TPH	Extracted:	457	49.8	663	50.0	<50.0	49.9	49.9

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

Holly Taylor  
Project Manager



# Certificate of Analysis Summary 653356

## Larson and Associates, Inc., Midland, TX

**Project Id:** 20-0107-03  
**Contact:** Mark Larson  
**Project Location:** NM

**Project Name:** Skeen 2H Pumping Unit  
**Date Received in Lab:** Fri Feb-21-20 03:47 pm  
**Report Date:** 02-MAR-20  
**Project Manager:** Holly Taylor

<i>Analysis Requested</i>		<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	653356-013 S-7 (0-0.5) 0-0.5 ft SOIL	653356-014 S-7 (0.5-1) 0.5-1 ft SOIL	653356-015 S-8 (0-0.5) 0-0.5 ft SOIL	653356-016 S-8 (0.5-1) 0.5-1 ft SOIL
<b>BTEX by EPA 8021B</b>		<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	Feb-20-20 12:11 Mar-01-20 10:00 Mar-01-20 15:49 mg/kg RL	Feb-20-20 12:13 Mar-01-20 10:00 Mar-01-20 16:09 mg/kg RL	Feb-20-20 12:06 Mar-01-20 10:00 Mar-01-20 16:30 mg/kg RL	Feb-20-20 12:07 Mar-01-20 10:00 Mar-01-20 16:50 mg/kg RL
Benzene			<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Toluene			<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene			<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes			<0.00398 0.00398	<0.00399 0.00399	<0.00401 0.00401	<0.00398 0.00398
o-Xylene			<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes			<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total BTEX			<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
<b>Chloride by EPA 300</b>		<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	Feb-24-20 12:40 Feb-24-20 15:44 mg/kg RL	Feb-24-20 12:40 Feb-24-20 15:50 mg/kg RL	Feb-24-20 12:40 Feb-24-20 15:56 mg/kg RL	Feb-24-20 12:40 Feb-24-20 16:03 mg/kg RL
Chloride			504 50.3	877 25.3	152 25.3	111 50.5
<b>TPH By SW8015 Mod</b>		<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	Feb-24-20 13:00 Feb-24-20 19:50 mg/kg RL	Feb-24-20 13:00 Feb-24-20 20:11 mg/kg RL	Feb-24-20 13:00 Feb-24-20 20:32 mg/kg RL	Feb-24-20 13:00 Feb-24-20 20:53 mg/kg RL
Gasoline Range Hydrocarbons			<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics			455 50.0	60.7 50.0	103 49.9	<50.0 50.0
Oil Range Hydrocarbons			62.2 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH			517 50.0	60.7 50.0	103 49.9	<50.0 50.0

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

Holly Taylor  
Project Manager

# **Analytical Report 653356**

**for**  
**Larson and Associates, Inc.**

**Project Manager: Mark Larson**

**Skeen 2H Pumping Unit**

**20-0107-03**

**02-MAR-20**

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)



02-MAR-20

Project Manager: **Mark Larson**

**Larson and Associates, Inc.**

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **653356**

**Skeen 2H Pumping Unit**

Project Address: NM

**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) 653356. 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. 653356 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,

A handwritten signature in cursive script that reads "Holly Taylor".

**Holly Taylor**

Project Manager

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.*

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
S-1 ( 0-0.5)	S	02-20-20 11:40	0 - 0.5 ft	653356-001
S-1 ( 0.5-1)	S	02-20-20 11:41	0.5 - 1 ft	653356-002
S-2 ( 0-0.5)	S	02-20-20 11:53	0 - 0.5 ft	653356-003
S-2 ( 0.5-1)	S	02-20-20 11:54	0.5 - 1 ft	653356-004
S-3 ( 0-0.5)	S	02-20-20 11:43	0 - 0.5 ft	653356-005
S-3 ( 0.5-1)	S	02-20-20 11:47	0.5 - 1 ft	653356-006
S-4 ( 0-0.5)	S	02-20-20 11:36	0 - 0.5 ft	653356-007
S-4 ( 0.5-1)	S	02-20-20 11:38	0.5 - 1 ft	653356-008
S-5 ( 0-0.5)	S	02-20-20 11:50	0 - 0.5 ft	653356-009
S-5 ( 0.5-1)	S	02-20-20 11:53	0.5 - 1 ft	653356-010
S-6 ( 0-0.5)	S	02-20-20 12:02	0 - 0.5 ft	653356-011
S-6 ( 0.5-1)	S	02-20-20 12:07	0.5 - 1 ft	653356-012
S-7 ( 0-0.5)	S	02-20-20 12:11	0 - 0.5 ft	653356-013
S-7 ( 0.5-1)	S	02-20-20 12:13	0.5 - 1 ft	653356-014
S-8 ( 0-0.5)	S	02-20-20 12:06	0 - 0.5 ft	653356-015
S-8 ( 0.5-1)	S	02-20-20 12:07	0.5 - 1 ft	653356-016



## CASE NARRATIVE

***Client Name: Larson and Associates, Inc.***

***Project Name: Skeen 2H Pumping Unit***

Project ID: 20-0107-03  
Work Order Number(s): 653356

Report Date: 02-MAR-20  
Date Received: 02/21/2020

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**Sample receipt non conformances and comments:**

None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3118121 BTEX by EPA 8021B

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

Batch: LBA-3118135 BTEX by EPA 8021B

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



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-1 ( 0-0.5)**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-001**

Date Collected: 02.20.20 11.40

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: **02.24.20 12.40**

Basis: **Wet Weight**

Seq Number: **3117491**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>3210</b>	49.7	mg/kg	02.24.20 13.45		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: **02.24.20 13.00**

Basis: **Wet Weight**

Seq Number: **3117576**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 14.36	U	1
<b>Diesel Range Organics</b>	C10C28DRO	<b>468</b>	50.0	mg/kg	02.24.20 14.36		1
<b>Oil Range Hydrocarbons</b>	PHCG2835	<b>55.2</b>	50.0	mg/kg	02.24.20 14.36		1
<b>Total TPH</b>	PHC635	<b>523</b>	50.0	mg/kg	02.24.20 14.36		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-135	02.24.20 14.36		
o-Terphenyl	84-15-1	106	%	70-135	02.24.20 14.36		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-1 ( 0-0.5)**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-001**

Date Collected: 02.20.20 11.40

Sample Depth: 0 - 0.5 ft

Analytical Method: **BTEX by EPA 8021B**

Prep Method: **SW5030B**

Tech: **KTL**

% Moisture:

Analyst: **KTL**

Date Prep: **02.29.20 08.30**

Basis: **Wet Weight**

Seq Number: **3118121**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.29.20 14.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.29.20 14.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	02.29.20 14.03		
4-Bromofluorobenzene	460-00-4	101	%	70-130	02.29.20 14.03		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-1 ( 0.5-1 )**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-002**

Date Collected: 02.20.20 11.41

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: **02.24.20 12.40**

Basis: **Wet Weight**

Seq Number: **3117491**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>3360</b>	49.9	mg/kg	02.24.20 13.51		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: **02.24.20 13.00**

Basis: **Wet Weight**

Seq Number: **3117576**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 15.38	U	1
<b>Diesel Range Organics</b>	C10C28DRO	<b>237</b>	50.0	mg/kg	02.24.20 15.38		1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 15.38	U	1
<b>Total TPH</b>	PHC635	<b>237</b>	50.0	mg/kg	02.24.20 15.38		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	88	%	70-135	02.24.20 15.38		
o-Terphenyl	84-15-1	98	%	70-135	02.24.20 15.38		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-1 ( 0.5-1 )**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-002**

Date Collected: 02.20.20 11.41

Sample Depth: 0.5 - 1 ft

Analytical Method: **BTEX by EPA 8021B**

Prep Method: **SW5030B**

Tech: **KTL**

% Moisture:

Analyst: **KTL**

Date Prep: **02.29.20 08.30**

Basis: **Wet Weight**

Seq Number: **3118121**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.29.20 14.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.29.20 14.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	02.29.20 14.23		
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.29.20 14.23		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-2 ( 0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-003

Date Collected: 02.20.20 11.53

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4230	50.2	mg/kg	02.24.20 13.58		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 15.59	U	1
<b>Diesel Range Organics</b>	C10C28DRO	411	50.0	mg/kg	02.24.20 15.59		1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 15.59	U	1
<b>Total TPH</b>	PHC635	411	50.0	mg/kg	02.24.20 15.59		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-135	02.24.20 15.59		
o-Terphenyl	84-15-1	100	%	70-135	02.24.20 15.59		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-2 ( 0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-003

Date Collected: 02.20.20 11.53

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 14.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 14.43	U	1
<b>Ethylbenzene</b>	100-41-4	<b>0.00370</b>	0.00200	mg/kg	02.29.20 14.43		1
<b>m,p-Xylenes</b>	179601-23-1	<b>0.0536</b>	0.00401	mg/kg	02.29.20 14.43		1
<b>o-Xylene</b>	95-47-6	<b>0.0182</b>	0.00200	mg/kg	02.29.20 14.43		1
<b>Total Xylenes</b>	1330-20-7	<b>0.0718</b>	0.00200	mg/kg	02.29.20 14.43		1
<b>Total BTEX</b>		<b>0.0755</b>	0.00200	mg/kg	02.29.20 14.43		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	02.29.20 14.43		
1,4-Difluorobenzene	540-36-3	88	%	70-130	02.29.20 14.43		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-2 ( 0.5-1 )**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-004**

Date Collected: 02.20.20 11.54

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: 02.24.20 12.40

Basis: **Wet Weight**

Seq Number: **3117491**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>4290</b>	49.8	mg/kg	02.24.20 14.04		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: 02.24.20 13.00

Basis: **Wet Weight**

Seq Number: **3117576**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	02.24.20 16.20	U	1
<b>Diesel Range Organics</b>	C10C28DRO	<b>681</b>	49.8	mg/kg	02.24.20 16.20		1
<b>Oil Range Hydrocarbons</b>	PHCG2835	<b>71.5</b>	49.8	mg/kg	02.24.20 16.20		1
<b>Total TPH</b>	PHC635	<b>753</b>	49.8	mg/kg	02.24.20 16.20		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	96	%	70-135	02.24.20 16.20		
o-Terphenyl	84-15-1	106	%	70-135	02.24.20 16.20		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-2 ( 0.5-1 )**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-004**

Date Collected: 02.20.20 11.54

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: **KTL**

% Moisture:

Analyst: **KTL**

Date Prep: **02.29.20 08.30**

Basis: **Wet Weight**

Seq Number: **3118121**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 15.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 15.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 15.03	U	1
<b>m,p-Xylenes</b>	179601-23-1	<b>0.0203</b>	0.00401	mg/kg	02.29.20 15.03		1
<b>o-Xylene</b>	95-47-6	<b>0.00412</b>	0.00200	mg/kg	02.29.20 15.03		1
<b>Total Xylenes</b>	1330-20-7	<b>0.0244</b>	0.00200	mg/kg	02.29.20 15.03		1
<b>Total BTEX</b>		<b>0.0244</b>	0.00200	mg/kg	02.29.20 15.03		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	02.29.20 15.03		
1,4-Difluorobenzene	540-36-3	93	%	70-130	02.29.20 15.03		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-3 ( 0-0.5)**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-005**

Date Collected: 02.20.20 11.43

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: **02.24.20 12.40**

Basis: **Wet Weight**

Seq Number: **3117491**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>1020</b>	49.7	mg/kg	02.24.20 14.23		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: **02.24.20 13.00**

Basis: **Wet Weight**

Seq Number: **3117576**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	02.24.20 16.41	U	1
<b>Diesel Range Organics</b>	C10C28DRO	<b>614</b>	49.9	mg/kg	02.24.20 16.41		1
<b>Oil Range Hydrocarbons</b>	PHCG2835	<b>79.9</b>	49.9	mg/kg	02.24.20 16.41		1
<b>Total TPH</b>	PHC635	<b>694</b>	49.9	mg/kg	02.24.20 16.41		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	89	%	70-135	02.24.20 16.41		
o-Terphenyl	84-15-1	104	%	70-135	02.24.20 16.41		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-3 ( 0-0.5)

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-005

Date Collected: 02.20.20 11.43

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.29.20 15.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.29.20 15.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.29.20 15.23		
4-Bromofluorobenzene	460-00-4	103	%	70-130	02.29.20 15.23		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-3 ( 0.5-1 )

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-006

Date Collected: 02.20.20 11.47

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	677	24.9	mg/kg	02.24.20 14.29		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 17.02	U	1
<b>Diesel Range Organics</b>	C10C28DRO	711	50.0	mg/kg	02.24.20 17.02		1
<b>Oil Range Hydrocarbons</b>	PHCG2835	84.0	50.0	mg/kg	02.24.20 17.02		1
<b>Total TPH</b>	PHC635	795	50.0	mg/kg	02.24.20 17.02		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-135	02.24.20 17.02		
o-Terphenyl	84-15-1	109	%	70-135	02.24.20 17.02		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-3 ( 0.5-1 )

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-006

Date Collected: 02.20.20 11.47

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.29.20 15.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.29.20 15.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.29.20 15.43		
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.29.20 15.43		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-4 ( 0-0.5)**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-007**

Date Collected: 02.20.20 11.36

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: **02.24.20 12.40**

Basis: **Wet Weight**

Seq Number: **3117491**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>820</b>	50.0	mg/kg	02.24.20 14.35		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: **02.24.20 13.00**

Basis: **Wet Weight**

Seq Number: **3117576**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	02.24.20 17.23	U	1
<b>Diesel Range Organics</b>	C10C28DRO	<b>404</b>	49.8	mg/kg	02.24.20 17.23		1
<b>Oil Range Hydrocarbons</b>	PHCG2835	<b>52.5</b>	49.8	mg/kg	02.24.20 17.23		1
<b>Total TPH</b>	PHC635	<b>457</b>	49.8	mg/kg	02.24.20 17.23		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-135	02.24.20 17.23		
o-Terphenyl	84-15-1	100	%	70-135	02.24.20 17.23		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-4 ( 0-0.5)

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-007

Date Collected: 02.20.20 11.36

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.29.20 16.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.29.20 16.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	02.29.20 16.03		
1,4-Difluorobenzene	540-36-3	94	%	70-130	02.29.20 16.03		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-4 ( 0.5-1 )

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-008

Date Collected: 02.20.20 11.38

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1050	50.0	mg/kg	02.24.20 14.41		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 17.44	U	1
<b>Diesel Range Organics</b>	C10C28DRO	597	50.0	mg/kg	02.24.20 17.44		1
<b>Oil Range Hydrocarbons</b>	PHCG2835	66.3	50.0	mg/kg	02.24.20 17.44		1
<b>Total TPH</b>	PHC635	663	50.0	mg/kg	02.24.20 17.44		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-135	02.24.20 17.44		
o-Terphenyl	84-15-1	106	%	70-135	02.24.20 17.44		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-4 ( 0.5-1 )

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-008

Date Collected: 02.20.20 11.38

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.29.20 16.24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.29.20 16.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	02.29.20 16.24		
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.29.20 16.24		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-5 ( 0-0.5)

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-009

Date Collected: 02.20.20 11.50

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	50.3	mg/kg	02.24.20 14.48		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 18.05	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	02.24.20 18.05	U	1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 18.05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.24.20 18.05	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane		111-85-3	91	%	70-135	02.24.20 18.05	
o-Terphenyl		84-15-1	94	%	70-135	02.24.20 18.05	



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-5 ( 0-0.5)

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-009

Date Collected: 02.20.20 11.50

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.29.20 16.44	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.29.20 16.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	02.29.20 16.44		
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.29.20 16.44		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-5 ( 0.5-1 )**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-010**

Date Collected: 02.20.20 11.53

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: 02.24.20 12.40

Basis: **Wet Weight**

Seq Number: **3117491**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>151</b>	49.5	mg/kg	02.24.20 15.13		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: 02.24.20 13.00

Basis: **Wet Weight**

Seq Number: **3117576**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	02.24.20 18.26	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	02.24.20 18.26	U	1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	02.24.20 18.26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.24.20 18.26	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane		111-85-3	109	%	70-135	02.24.20 18.26	
o-Terphenyl		84-15-1	120	%	70-135	02.24.20 18.26	



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-5 ( 0.5-1 )

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-010

Date Collected: 02.20.20 11.53

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.29.20 08.30

Basis: Wet Weight

Seq Number: 3118121

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.29.20 17.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.29.20 17.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.29.20 17.04		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.29.20 17.04		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-6 ( 0-0.5)**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-011**

Date Collected: 02.20.20 12.02

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: **02.24.20 12.40**

Basis: **Wet Weight**

Seq Number: **3117491**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>916</b>	25.0	mg/kg	02.24.20 15.19		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: **02.24.20 13.00**

Basis: **Wet Weight**

Seq Number: **3117576**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	02.24.20 19.08	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	02.24.20 19.08	U	1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	02.24.20 19.08	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.24.20 19.08	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane		111-85-3	86	%	70-135	02.24.20 19.08	
o-Terphenyl		84-15-1	91	%	70-135	02.24.20 19.08	



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-6 ( 0-0.5)**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-011**

Date Collected: 02.20.20 12.02

Sample Depth: 0 - 0.5 ft

Analytical Method: **BTEX by EPA 8021B**

Prep Method: **SW5030B**

Tech: **KTL**

% Moisture:

Analyst: **KTL**

Date Prep: **02.29.20 08.30**

Basis: **Wet Weight**

Seq Number: **3118121**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.29.20 18.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.29.20 18.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	02.29.20 18.23		
4-Bromofluorobenzene	460-00-4	82	%	70-130	02.29.20 18.23		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-6 ( 0.5-1)**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-012**

Date Collected: 02.20.20 12.07

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: 02.24.20 12.40

Basis: **Wet Weight**

Seq Number: **3117491**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>657</b>	49.9	mg/kg	02.24.20 15.38		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: 02.24.20 13.00

Basis: **Wet Weight**

Seq Number: **3117576**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	02.24.20 19.29	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	02.24.20 19.29	U	1
Oil Range Hydrocarbons	PHCG2835	<49.8	49.8	mg/kg	02.24.20 19.29	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.24.20 19.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane		111-85-3	91	%	70-135	02.24.20 19.29	
o-Terphenyl		84-15-1	94	%	70-135	02.24.20 19.29	



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-6 ( 0.5-1 )**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-012**

Date Collected: 02.20.20 12.07

Sample Depth: 0.5 - 1 ft

Analytical Method: **BTEX by EPA 8021B**

Prep Method: **SW5030B**

Tech: **KTL**

% Moisture:

Analyst: **KTL**

Date Prep: **02.29.20 08.30**

Basis: **Wet Weight**

Seq Number: **3118121**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.29.20 18.43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.29.20 18.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.29.20 18.43		
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.29.20 18.43		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-7 ( 0-0.5)

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-013

Date Collected: 02.20.20 12.11

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	504	50.3	mg/kg	02.24.20 15.44		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 19.50	U	1
<b>Diesel Range Organics</b>	C10C28DRO	<b>455</b>	50.0	mg/kg	02.24.20 19.50		1
<b>Oil Range Hydrocarbons</b>	PHCG2835	<b>62.2</b>	50.0	mg/kg	02.24.20 19.50		1
<b>Total TPH</b>	PHC635	<b>517</b>	50.0	mg/kg	02.24.20 19.50		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-135	02.24.20 19.50		
o-Terphenyl	84-15-1	106	%	70-135	02.24.20 19.50		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-7 ( 0-0.5)

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-013

Date Collected: 02.20.20 12.11

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.01.20 10.00

Basis: Wet Weight

Seq Number: 3118135

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.01.20 15.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.01.20 15.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	03.01.20 15.49		
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.01.20 15.49		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: S-7 ( 0.5-1 )

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-014

Date Collected: 02.20.20 12.13

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	877	25.3	mg/kg	02.24.20 15.50		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 20.11	U	1
<b>Diesel Range Organics</b>	C10C28DRO	<b>60.7</b>	50.0	mg/kg	02.24.20 20.11		1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 20.11	U	1
<b>Total TPH</b>	PHC635	<b>60.7</b>	50.0	mg/kg	02.24.20 20.11		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	93	%	70-135	02.24.20 20.11		
o-Terphenyl	84-15-1	97	%	70-135	02.24.20 20.11		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-7 ( 0.5-1 )

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-014

Date Collected: 02.20.20 12.13

Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.01.20 10.00

Basis: Wet Weight

Seq Number: 3118135

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.01.20 16.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.01.20 16.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	88	%	70-130	03.01.20 16.09		
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.01.20 16.09		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-8 ( 0-0.5)**

Matrix: Soil

Date Received: 02.21.20 15.47

Lab Sample Id: 653356-015

Date Collected: 02.20.20 12.06

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.24.20 12.40

Basis: Wet Weight

Seq Number: 3117491

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>152</b>	25.3	mg/kg	02.24.20 15.56		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.24.20 13.00

Basis: Wet Weight

Seq Number: 3117576

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	02.24.20 20.32	U	1
<b>Diesel Range Organics</b>	C10C28DRO	<b>103</b>	49.9	mg/kg	02.24.20 20.32		1
Oil Range Hydrocarbons	PHCG2835	<49.9	49.9	mg/kg	02.24.20 20.32	U	1
<b>Total TPH</b>	PHC635	<b>103</b>	49.9	mg/kg	02.24.20 20.32		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane		111-85-3	89	%	70-135	02.24.20 20.32	
o-Terphenyl		84-15-1	95	%	70-135	02.24.20 20.32	



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-8 ( 0-0.5)**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-015**

Date Collected: 02.20.20 12.06

Sample Depth: 0 - 0.5 ft

Analytical Method: **BTEX by EPA 8021B**

Prep Method: **SW5030B**

Tech: **KTL**

% Moisture:

Analyst: **KTL**

Date Prep: **03.01.20 10.00**

Basis: **Wet Weight**

Seq Number: **3118135**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.01.20 16.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.01.20 16.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.01.20 16.30		
4-Bromofluorobenzene	460-00-4	86	%	70-130	03.01.20 16.30		



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-8 ( 0.5-1)**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-016**

Date Collected: 02.20.20 12.07

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: 02.24.20 12.40

Basis: **Wet Weight**

Seq Number: **3117491**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>111</b>	50.5	mg/kg	02.24.20 16.03		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: 02.24.20 13.00

Basis: **Wet Weight**

Seq Number: **3117576**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	02.24.20 20.53	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	02.24.20 20.53	U	1
Oil Range Hydrocarbons	PHCG2835	<50.0	50.0	mg/kg	02.24.20 20.53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.24.20 20.53	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane		111-85-3	90	%	70-135	02.24.20 20.53	
o-Terphenyl		84-15-1	92	%	70-135	02.24.20 20.53	



# Certificate of Analytical Results 653356



## Larson and Associates, Inc., Midland, TX

### Skeen 2H Pumping Unit

Sample Id: **S-8 ( 0.5-1 )**

Matrix: **Soil**

Date Received: 02.21.20 15.47

Lab Sample Id: **653356-016**

Date Collected: 02.20.20 12.07

Sample Depth: 0.5 - 1 ft

Analytical Method: **BTEX by EPA 8021B**

Prep Method: **SW5030B**

Tech: **KTL**

% Moisture:

Analyst: **KTL**

Date Prep: **03.01.20 10.00**

Basis: **Wet Weight**

Seq Number: **3118135**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.01.20 16.50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.01.20 16.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	83	%	70-130	03.01.20 16.50		
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.01.20 16.50		

- 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.

**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 653356

## Larson and Associates, Inc. Skeen 2H Pumping Unit

**Analytical Method: Chloride by EPA 300**

Seq Number:	3117491	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7697309-1-BLK	LCS Sample Id: 7697309-1-BKS				Date Prep: 02.24.20			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	<0.858	250	251	100	250	100	90-110	0	20
								mg/kg	02.24.20 13:14

**Analytical Method: Chloride by EPA 300**

Seq Number:	3117491	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	653386-006	MS Sample Id: 653386-006 S				Date Prep: 02.24.20			
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	42.9	202	237	96	240	98	90-110	1	20
								mg/kg	02.24.20 13:33

**Analytical Method: Chloride by EPA 300**

Seq Number:	3117491	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	653390-001	MS Sample Id: 653390-001 S				Date Prep: 02.24.20			
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	267	200	466	100	467	100	90-110	0	20
								mg/kg	02.24.20 15:00

**Analytical Method: TPH By SW8015 Mod**

Seq Number:	3117576	Matrix: Solid				Prep Method: SW8015P			
MB Sample Id:	7697335-1-BLK	LCS Sample Id: 7697335-1-BKS				Date Prep: 02.24.20			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Gasoline Range Hydrocarbons	<15.0	1000	879	88	876	88	70-135	0	20
Diesel Range Organics	<15.0	1000	967	97	930	93	70-135	4	20
<b>Surrogate</b>	<b>MB %Rec</b>	<b>MB Flag</b>	<b>LCS %Rec</b>	<b>LCS Flag</b>	<b>LCSD %Rec</b>	<b>LCSD Flag</b>	<b>Limits</b>	<b>Units</b>	<b>Analysis Date</b>
1-Chlorooctane	99		106		102		70-135	%	02.24.20 13:54
o-Terphenyl	106		109		105		70-135	%	02.24.20 13:54

**Analytical Method: TPH By SW8015 Mod**

Seq Number:	3117576	Matrix: Solid				Prep Method: SW8015P			
MB Sample Id:	7697335-1-BLK	MB Sample Id: 7697335-1-BLK				Date Prep: 02.24.20			
<b>Parameter</b>	<b>MB Result</b>							<b>Units</b>	<b>Analysis Date</b>
Oil Range Hydrocarbons	<50.0							mg/kg	02.24.20 13:33

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

[D] = 100\*(C-A) / B  
RPD = 200\* | (C-E) / (C+E) |  
[D] = 100 \* (C) / [B]  
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 653356

## Larson and Associates, Inc.

Skeen 2H Pumping Unit

**Analytical Method: TPH By SW8015 Mod**

Seq Number:	3117576	Matrix:	Soil				Prep Method:	SW8015P
Parent Sample Id:	653356-001	MS Sample Id:	653356-001 S				Date Prep:	02.24.20
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD RPD Limit Units</b>
Gasoline Range Hydrocarbons	<15.0	998	880	88	878	88	70-135	0 20 mg/kg 02.24.20 14:56
Diesel Range Organics	468	998	1470	100	1450	98	70-135	1 20 mg/kg 02.24.20 14:56
<b>Surrogate</b>			<b>MS %Rec</b>	<b>MS Flag</b>	<b>MSD %Rec</b>	<b>MSD Flag</b>	<b>Limits</b>	<b>Units</b>
1-Chlorooctane			94		94		70-135	% 02.24.20 14:56
o-Terphenyl			110		109		70-135	% 02.24.20 14:56

**Analytical Method: BTEX by EPA 8021B**

Seq Number:	3118121	Matrix:	Solid				Prep Method:	SW5030B
MB Sample Id:	7697783-1-BLK	LCS Sample Id:	7697783-1-BKS				Date Prep:	02.29.20
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD RPD Limit Units</b>
Benzene	<0.000385	0.100	0.116	116	0.117	117	70-130	1 35 mg/kg 02.29.20 11:43
Toluene	<0.000456	0.100	0.107	107	0.114	114	70-130	6 35 mg/kg 02.29.20 11:43
Ethylbenzene	<0.000565	0.100	0.101	101	0.108	108	70-130	7 35 mg/kg 02.29.20 11:43
m,p-Xylenes	<0.00101	0.200	0.198	99	0.216	108	70-130	9 35 mg/kg 02.29.20 11:43
o-Xylene	<0.000344	0.100	0.0983	98	0.107	107	70-130	8 35 mg/kg 02.29.20 11:43
<b>Surrogate</b>	<b>MB %Rec</b>	<b>MB Flag</b>	<b>LCS %Rec</b>	<b>LCS Flag</b>	<b>LCSD %Rec</b>	<b>LCSD Flag</b>	<b>Limits</b>	<b>Units</b>
1,4-Difluorobenzene	97		100		99		70-130	% 02.29.20 11:43
4-Bromofluorobenzene	86		92		98		70-130	% 02.29.20 11:43

**Analytical Method: BTEX by EPA 8021B**

Seq Number:	3118135	Matrix:	Solid				Date Prep:	03.01.20
MB Sample Id:	7697798-1-BLK	LCS Sample Id:	7697798-1-BKS				LCSD Sample Id:	7697798-1-BSD
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD RPD Limit Units</b>
Benzene	<0.000385	0.100	0.124	124	0.107	107	70-130	15 35 mg/kg 03.01.20 12:50
Toluene	<0.000456	0.100	0.117	117	0.107	107	70-130	9 35 mg/kg 03.01.20 12:50
Ethylbenzene	<0.000565	0.100	0.112	112	0.103	103	70-130	8 35 mg/kg 03.01.20 12:50
m,p-Xylenes	<0.00101	0.200	0.222	111	0.209	105	70-130	6 35 mg/kg 03.01.20 12:50
o-Xylene	<0.000344	0.100	0.111	111	0.104	104	70-130	7 35 mg/kg 03.01.20 12:50
<b>Surrogate</b>	<b>MB %Rec</b>	<b>MB Flag</b>	<b>LCS %Rec</b>	<b>LCS Flag</b>	<b>LCSD %Rec</b>	<b>LCSD Flag</b>	<b>Limits</b>	<b>Units</b>
1,4-Difluorobenzene	93		102		100		70-130	% 03.01.20 12:50
4-Bromofluorobenzene	83		97		100		70-130	% 03.01.20 12:50

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

[D] = 100\*(C-A) / B  
RPD = 200\* | (C-E) / (C+E) |  
[D] = 100 \* (C) / [B]  
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 653356

## Larson and Associates, Inc. Skeen 2H Pumping Unit

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 3118121

Parent Sample Id: 653356-002

Matrix: Soil

MS Sample Id: 653356-002 S

Prep Method: SW5030B

Date Prep: 02.29.20

MSD Sample Id: 653356-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000382	0.0992	0.100	101	0.109	109	70-130	9	35	mg/kg	02.29.20 12:24	
Toluene	0.000719	0.0992	0.0937	94	0.100	100	70-130	7	35	mg/kg	02.29.20 12:24	
Ethylbenzene	<0.000560	0.0992	0.0806	81	0.0901	90	70-130	11	35	mg/kg	02.29.20 12:24	
m,p-Xylenes	<0.00101	0.198	0.157	79	0.177	89	70-130	12	35	mg/kg	02.29.20 12:24	
o-Xylene	0.000439	0.0992	0.0782	78	0.0876	88	70-130	11	35	mg/kg	02.29.20 12:24	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1,4-Difluorobenzene			102		98		70-130			%	02.29.20 12:24	
4-Bromofluorobenzene			77		96		70-130			%	02.29.20 12:24	

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 3118135

Parent Sample Id: 653393-002

Matrix: Soil

MS Sample Id: 653393-002 S

Prep Method: SW5030B

Date Prep: 03.01.20

MSD Sample Id: 653393-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.137	136	0.132	132	70-130	4	35	mg/kg	03.01.20 13:30	X
Toluene	<0.000458	0.101	0.130	129	0.121	121	70-130	7	35	mg/kg	03.01.20 13:30	
Ethylbenzene	<0.000568	0.101	0.120	119	0.111	111	70-130	8	35	mg/kg	03.01.20 13:30	
m,p-Xylenes	<0.00102	0.201	0.229	114	0.212	106	70-130	8	35	mg/kg	03.01.20 13:30	
o-Xylene	<0.000346	0.101	0.116	115	0.108	108	70-130	7	35	mg/kg	03.01.20 13:30	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1,4-Difluorobenzene			102		103		70-130			%	03.01.20 13:30	
4-Bromofluorobenzene			96		101		70-130			%	03.01.20 13:30	

MS/MSD Percent Recovery  
 Relative Percent Difference  
 LCS/LCSD Recovery  
 Log Difference

[D] = 100\*(C-A) / B  
 RPD = 200\* | (C-E) / (C+E) |  
 [D] = 100 \* (C) / [B]  
 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

**Larson & Associates, Inc.**  
Environmental Consultants

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

Data Reported to:

TRRP report?  
 Yes  No

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

TIME ZONE:  
**MST**

PRESERVATION	# of Containers
HCl	1
HNO <sub>3</sub>	1
H <sub>2</sub> SO <sub>4</sub>	1
NaOH	1
ICE	1
UNPRESERVED	1

Field Sample I.D.	Lab #	Date	Time	Matrix
S-1 (0-0.5')	213020	11:40	5	1
S-1 (0.5-1')		11:41		
S-2 (0-0.5')		11:53		
S-2 (0.5-1')		11:54		
S-3 (0-0.5')		11:43		
S-3 (0.5-1')		11:47		
S-4 (0-0.5')		11:38		
S-4 (0.5-1')		11:50		
S-5 (0-0.5')		11:53		
S-5 (0-0.5')		12:02		
S-6 (0.5-1')		12:07		
S-7 (0-0.5')		12:11		
S-7 (0.5-1')		12:13		
S-8 (0-0.5')		12:04	1	1

TOTAL 15

**ANALYSES**

BTEX XMTBEx  TPH 1005  TPH 1006   
 TRPH 418.1  PAH 8270  HOLDPAH  HOMOGENIZED   
 GASOLINE MOD 8015  8151 HERBICIDES  OTHER LIST   
 DIESSEL - MOD 8015  VOC 8270  PAH 8270  Semi-VOC   
 OIL - MOD 8260  VOC 8270  D.W. 200.8  TCLP   
 SVOC 8270  HERB  OTHER LIST  CYANIDE   
 8081 PESTICIDES  8082 PCBs  TOTAL METALS (RCRA)  % MOISTURE  CHROMIUM   
 8082 PCBS  TBLP - METALS  D.W. 200.8  FLASHPOINT   
 TBLP - PEST  HERB  OTHER LIST  TOTAL METALS (RCRA)   
 TOTAL METALS (RCRA)  D.W. 200.8  FLASHPOINT   
 LEAD - TOTAL  D.W. 200.8  TOTAL METALS (RCRA)   
 RCI  TOX  FLASHPOINT  TOTAL METALS (RCRA)   
 TDS  TSS  % MOISTURE  PECHLORATE   
 PH  HEXAVALENT CHROMIUM  ANIONS  ALKALINITY   
 EXPLOSIVES  CARRIER BILL #   
 CHLORIDE  FIELD NOTES

DATE: 2/12/2020 PAGE 1 OF 2  
 PO#: LS53356 LAB WORK ORDER#: LS53356  
 PROJECT LOCATION OR NAME: Skf on 24 Pumping Unit  
 LA PROJECT #: 2D-DDT-03 COLLECTOR: EC/RS

## CHAIN-OF-CUSTODY

RELINQUISHED BY:(Signature)	<u>Rocky Ober</u>	DATE/TIME	<u>2-21-20 3:47</u>	RECEIVED BY (Signature)	<u>MV</u>
RELINQUISHED BY:(Signature)		DATE/TIME		RECEIVED BY: (Signature)	
RELINQUISHED BY:(Signature)		DATE/TIME		RECEIVED BY: (Signature)	
LABORATORY:	<u>Yerco</u>				

NORMAL <input checked="" type="checkbox"/>	5 to 7 Days <input type="checkbox"/>	1 DAY <input type="checkbox"/>	2 DAY <input type="checkbox"/>	OTHER <input type="checkbox"/>
RECEIVING TEMP: <u>-14</u>	Therm#: <u>R8</u>			
CUSTODY SEALS -	<input type="checkbox"/> BROKEN	<input type="checkbox"/> INTACT	<input type="checkbox"/> NOT USED	<input type="checkbox"/> CARRIER BILL #
<input type="checkbox"/> HAND DELIVERED				

## CHAIN-OF-CUSTODY

No N

**A**rson &  
ssociates, Inc.  
Environmental Consultants

**SOCIUS, LLC.**  
Environmental Consultants

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

Data Reported to:

TRRP report?  Yes  No

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

DATE: 2/12/2020 PAGE 2 OF 8  
PO#: \_\_\_\_\_ LAB WORK ORDER# 1053354  
PROJECT LOCATION OR NAME: Skin & Tissue Pumping Unit  
LAI PROJECT #: 20-0107-03 COLLECTOR: JEC/DS

<b>Larson &amp; Associates, Inc.</b> <small>Environmental Consultants</small>				DATE: <u>6/21/00</u>		PAGE <u>9</u> OF <u>81</u>																																																									
				PROJECT LOCATION OR NAME: <u>Sycamore Pumping Unit</u>		PO#:																																																									
				TIME ZONE: <u>Midland, TX 79701</u>		PROJECT #:																																																									
				Time zone/State: <u>MS</u>		LA PROJECT #: <u>20-0107-03</u>																																																									
<table border="1"> <tr> <td>S=SOIL A=AIR</td> <td>W=WATER</td> <td>P=PAINT SL=SLUDGE</td> <td>O=OTHER</td> </tr> <tr> <td colspan="4">PRESCRIPTION</td> </tr> <tr> <td colspan="4"> <input type="checkbox"/> HCl  <input type="checkbox"/> HNO<sub>3</sub>  <input type="checkbox"/> H<sub>2</sub>SO<sub>4</sub>  <input type="checkbox"/> NaOH  <input type="checkbox"/> ICE  <input type="checkbox"/> UNPRESERVED         </td> </tr> <tr> <td colspan="4"># of Containers</td> </tr> <tr> <td colspan="4"> <input checked="" type="checkbox"/> 1         </td> </tr> <tr> <td colspan="4">           ANALYSES            BTEX            DMTBE            TPH 1005            TPH 1006            TRPH 418.1            GASOLINE MOD 8015            DIESEL - MOD 8015            OIL - MOD 8015            VOC 8260            SVOC 8270            PAH 8270            8151 HERBICIDES            HERB            Semi-VOC            OTHER LIST            TCLP VOC            VOC            8081 PESTICIDES            8082 PCB'S            TBLP - METALS (RCRA)            TOTAL METALS (RCRA)            LEAD - TOTAL            TOX            % MOISTURE            CHROMIUM            PECHLORATE            EXPLOSIVES            CHLORIDES            ANIONS            AALKALINITY            FIELD NOTES         </td> </tr> <tr> <td colspan="4">           TURN AROUND TIME            NORMAL <u>5</u> days            1 DAY <input checked="" type="checkbox"/>            2 DAY <input type="checkbox"/>            OTHER <input type="checkbox"/> </td> </tr> <tr> <td colspan="4">           LABORATORY USE ONLY:            RECEIVING TEMP: <u>-14</u> THERM# <u>RJ</u>            CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED            CARRIER BILL# _____  <input type="checkbox"/> HAND DELIVERED         </td> </tr> <tr> <td colspan="2">           RELINQUISHED BY: <u>(Signature)</u>  <u>Ron</u>            DATE/TIME: <u>2-21-00 3:47</u>            RECEIVED BY: <u>(Signature)</u>  <u>JF</u> </td> <td colspan="2">           TOTAL         </td> <td colspan="4"></td> </tr> <tr> <td colspan="2">           RELINQUISHED BY: <u>(Signature)</u>  <u>RELINQUISHED BY: (Signature)</u>            DATE/TIME: <u>RECEIVED BY: (Signature)</u>  <u>RECEIVED BY: (Signature)</u> </td> <td colspan="2"></td> <td colspan="4"></td> </tr> <tr> <td colspan="2">           LABORATORY: <u>YES</u> </td> <td colspan="2"></td> <td colspan="4"></td> </tr> </table>				S=SOIL A=AIR	W=WATER	P=PAINT SL=SLUDGE	O=OTHER	PRESCRIPTION				<input type="checkbox"/> HCl <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> ICE <input type="checkbox"/> UNPRESERVED				# of Containers				<input checked="" type="checkbox"/> 1				ANALYSES BTEX DMTBE TPH 1005 TPH 1006 TRPH 418.1 GASOLINE MOD 8015 DIESEL - MOD 8015 OIL - MOD 8015 VOC 8260 SVOC 8270 PAH 8270 8151 HERBICIDES HERB Semi-VOC OTHER LIST TCLP VOC VOC 8081 PESTICIDES 8082 PCB'S TBLP - METALS (RCRA) TOTAL METALS (RCRA) LEAD - TOTAL TOX % MOISTURE CHROMIUM PECHLORATE EXPLOSIVES CHLORIDES ANIONS AALKALINITY FIELD NOTES				TURN AROUND TIME NORMAL <u>5</u> days 1 DAY <input checked="" type="checkbox"/> 2 DAY <input type="checkbox"/> OTHER <input type="checkbox"/>				LABORATORY USE ONLY: RECEIVING TEMP: <u>-14</u> THERM# <u>RJ</u> CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED CARRIER BILL# _____ <input type="checkbox"/> HAND DELIVERED				RELINQUISHED BY: <u>(Signature)</u> <u>Ron</u> DATE/TIME: <u>2-21-00 3:47</u> RECEIVED BY: <u>(Signature)</u> <u>JF</u>		TOTAL						RELINQUISHED BY: <u>(Signature)</u> <u>RELINQUISHED BY: (Signature)</u> DATE/TIME: <u>RECEIVED BY: (Signature)</u> <u>RECEIVED BY: (Signature)</u>								LABORATORY: <u>YES</u>											
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LABORATORY: <u>YES</u>																																																															



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



**Client:** Larson and Associates, Inc.

**Date/ Time Received:** 02/21/2020 03:47:00 PM

**Work Order #:** 653356

**Acceptable Temperature Range:** 0 - 6 degC  
**Air and Metal samples Acceptable Range:** Ambient  
**Temperature Measuring device used :** R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-1.4
#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:**

Alexis Jaime

Date: 02/21/2020

**Checklist reviewed by:**

Holly Taylor

Date: 03/02/2020



Certificate of Analysis Summary 656204

Larson and Associates, Inc., Midland, TX

Project Name: Skeen 2H Pumping Unit

**Project Id:** 20-0107-03  
**Contact:** Mark Larson

Contact: Mark Larson

## Project Location:

Date Received in Lab: Thu 03 19 2020 09:49

Report Date: 03.26.2020 13:35

Project Manager: Holly Taylor

<b>Analysis Requested</b>	<b>Lab Id:</b> 656204-001 <b>Field Id:</b> S-1 (2') <b>Depth:</b> 03.17.2020 12:55	<b>Matrix:</b> SOIL <b>Sampled:</b> 03.17.2020 12:55	<b>Extracted:</b> 03.20.2020 11:05 <b>Analyzed:</b> 03.20.2020 13:52 <b>Units/RL:</b> mg/kg      RL	<b>Lab Id:</b> 656204-002 <b>Field Id:</b> S-1 (3') <b>Depth:</b> 03.17.2020 12:56	<b>Matrix:</b> SOIL <b>Sampled:</b> 03.17.2020 12:56	<b>Extracted:</b> 03.23.2020 11:00 <b>Analyzed:</b> 03.23.2020 14:32 <b>Units/RL:</b> mg/kg      RL	<b>Lab Id:</b> 656204-003 <b>Field Id:</b> S-1 (5) <b>Depth:</b> 03.17.2020 13:05	<b>Matrix:</b> SOIL <b>Sampled:</b> 03.17.2020 13:05	<b>Extracted:</b> 03.23.2020 11:00 <b>Analyzed:</b> 03.23.2020 14:44 <b>Units/RL:</b> mg/kg      RL	<b>Lab Id:</b> 656204-004 <b>Field Id:</b> S-1 (10') <b>Depth:</b> 03.17.2020 13:06	<b>Matrix:</b> SOIL <b>Sampled:</b> 03.17.2020 13:06	<b>Extracted:</b> 03.20.2020 11:05 <b>Analyzed:</b> 03.20.2020 14:17 <b>Units/RL:</b> mg/kg      RL	<b>Lab Id:</b> 656204-005 <b>Field Id:</b> S-7 (2) <b>Depth:</b> 03.17.2020 13:18	<b>Matrix:</b> SOIL <b>Sampled:</b> 03.17.2020 13:18	<b>Extracted:</b> 03.20.2020 11:05 <b>Analyzed:</b> 03.20.2020 14:17 <b>Units/RL:</b> mg/kg      RL	<b>Lab Id:</b> 656204-006 <b>Field Id:</b> S-7 (3') <b>Depth:</b> 03.17.2020 13:19
<b>Chloride by EPA 300</b>																
<b>Chloride</b>	<b>Extracted:</b> 123      49.7	<b>Analyzed:</b> 7.00      4.98	<b>Units/RL:</b> mg/kg      RL	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 13:04	<b>Units/RL:</b> mg/kg      RL	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 14:07	<b>Units/RL:</b> mg/kg      RL	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 14:28	<b>Units/RL:</b> mg/kg      RL	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 14:49	<b>Units/RL:</b> mg/kg      RL	
<b>TPH by SW8015 Mod</b>	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 13:04	<b>Units/RL:</b> mg/kg      RL	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 14:07	<b>Units/RL:</b> mg/kg      RL	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 14:28	<b>Units/RL:</b> mg/kg      RL	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 14:49	<b>Units/RL:</b> mg/kg      RL	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 14:49	<b>Units/RL:</b> mg/kg      RL	
Gasoline Range Hydrocarbons (GRO)	<50.0	50.0	<49.8	49.8	<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9
Diesel Range Organics (DRO)	<50.0	50.0	<49.8	49.8	<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)	<50.0	50.0	<49.8	49.8	<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9
Total TPH	<50.0	50.0	<49.8	49.8	<49.8	49.8	<50.0	50.0	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best data of XENCO Laboratories. XENCO laboratories assumes no responsibility and makes no warranty to the end user of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

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Holly Taylor  
Project Manager



# Certificate of Analysis Summary 656204

Larson and Associates, Inc., Midland, TX

**Project Name:** Skeen 2H Pumping Unit

**Project Id:** 20-0107-03  
**Contact:** Mark Larson

**Project Location:**

**Date Received in Lab:** Thu 03.19.2020 09:49

**Report Date:** 03.26.2020 13:35

**Project Manager:** Holly Taylor

<b>Analysis Requested</b>		<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	656204-007 S-7 (5)	656204-008 S-9 (0.5)	656204-009 S-9 (1')	656204-010 S-10 (0.5)	656204-011 S-10 (0.5)	656204-012 S-10 (1')
<b>BTEX by EPA 8021B</b>		<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	03.17.2020 13:24	03.17.2020 13:25	03.17.2020 13:23	03.17.2020 12:28	03.17.2020 13:12	03.17.2020 13:16
				SOIL	SOIL	SOIL	SOIL	SOIL
Benzene				mg/kg	RL	mg/kg	RL	mg/kg
Toluene				<0.00198	0.00198	<0.00199	0.00199	<0.00198
Ethylbenzene				<0.00198	0.00198	<0.00199	0.00199	<0.00198
m,p-Xylenes				<0.00397	0.00397	<0.00398	0.00398	<0.00397
o-Xylene				<0.00198	0.00198	<0.00199	0.00199	<0.00198
Total Xylenes				<0.00198	0.00198	<0.00199	0.00199	<0.00198
Total BTEX				<0.00198	0.00198	<0.00199	0.00199	<0.00198
<b>Chloride by EPA 300</b>		<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	03.20.2020 11:15 03.20.2020 18:38	03.20.2020 11:15 03.20.2020 18:44	03.20.2020 11:15 03.20.2020 18:50	03.20.2020 11:15 03.20.2020 18:57	03.20.2020 11:15 03.20.2020 19:03	03.20.2020 11:15 03.20.2020 19:09
Chloride			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>TPH by SW8015 Mod</b>		<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	<4.95	4.95	<4.95	4.95	<5.03	5.03
Gasoline Range Hydrocarbons (GRO)					03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00
Diesel Range Organics (DRO)					03.20.2020 16:34	03.20.2020 16:55	03.20.2020 17:37	03.20.2020 17:58
Motor Oil Range Hydrocarbons (MRO)					mg/kg	mg/kg	mg/kg	mg/kg
Total TPH					mg/kg	mg/kg	mg/kg	mg/kg

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Holly Taylor  
Project Manager



Certificate of Analysis Summary 656204

Larson and Associates, Inc., Midland, TX

**Project Name:** Skeen 2H Pumping Unit

**Project Id:** 20-0107-03  
**Contact:** Mark Larson

Contact: Mark Larson

## Project Location:

Date Received in Lab: Thu 03.19.2020 09:49

Report Date: 03.26.2020 13:35

Project Manager: Holly Taylor

Date Received in Lab: Thu 03.19.2020 09:49

Report Date: 03.26.2020 13:35

Project Manager: Holly Taylor

Analysis Requested		Lab Id: S-4 (2)	656204-013 S-4 (3)	656204-014 S-4 (5)	656204-015 S-4 (7.5)	656204-016 S-4 (2)	656204-017 S-6 (2)	656204-018 S-6 (4)
Matrix:	SOIL		SOIL		SOIL		SOIL	SOIL
Sampled:	03.17.2020 13:44		03.17.2020 13:45		03.17.2020 14:01		03.17.2020 14:02	03.17.2020 14:14
Extracted:	03.20.2020 11:15		03.20.2020 11:15		03.20.2020 11:15		03.20.2020 11:15	03.20.2020 11:15
Analyzed:	03.20.2020 16:18		03.20.2020 19:16		03.20.2020 16:50		03.20.2020 19:22	03.20.2020 17:15
Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride	114	25.1	43.8	4.97	61.3	50.5	40.1	4.96
TPH by SW8015 Mod		Extracted:	03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00	03.20.2020 11:00
		Analyzed:	03.20.2020 18:19	03.20.2020 18:39	03.20.2020 19:00	03.20.2020 19:00	03.20.2020 19:21	03.20.2020 19:21
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)	<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0
Diesel Range Organics (DRO)	<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)	<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0
Total TPH	<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best of data hereof XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end user of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Holly Taylor  
Project Manager



# Certificate of Analysis Summary 656204

Larson and Associates, Inc., Midland, TX

Project Name: Skeen 2H Pumping Unit

Project Id: 20-0107-03  
Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.19.2020 09:49

Report Date: 03.26.2020 13:35

Project Manager: Holly Taylor

Analysis Requested		Lab Id: Field Id: Depth:	656204-019 S-6 (5') SOIL	656204-020 S-6 (8') SOIL	656204-021 S-2 (2) SOIL	656204-022 S-2 (3) SOIL	656204-023 S-2 (5) SOIL	656204-024 S-2 (8) SOIL
<b>Chloride by EPA 300</b>	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	03.17.2020 14:17 03.20.2020 11:15 03.20.2020 17:28 mg/kg RL	03.17.2020 14:18 03.20.2020 11:15 03.20.2020 17:34 mg/kg RL	03.18.2020 10:02 03.20.2020 11:15 03.20.2020 17:40 mg/kg RL	03.18.2020 10:03 03.20.2020 11:15 03.20.2020 17:47 mg/kg RL	03.18.2020 10:06 03.20.2020 11:15 03.20.2020 17:53 mg/kg RL	03.18.2020 10:06 03.20.2020 11:15 03.20.2020 14:24 mg/kg RL	03.18.2020 10:07 03.20.2020 11:05 03.20.2020 14:24 mg/kg RL
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>			03.20.2020 11:00 03.20.2020 13:04 mg/kg RL	03.20.2020 11:00 03.20.2020 14:07 mg/kg RL	03.20.2020 11:00 03.20.2020 14:28 mg/kg RL	03.20.2020 11:00 03.20.2020 14:28 mg/kg RL	03.20.2020 11:00 03.20.2020 14:49 mg/kg RL
Gasoline Range Hydrocarbons (GRO)				<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 49.8	50.0
Diesel Range Organics (DRO)				<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 49.8	50.0
Motor Oil Range Hydrocarbons (MRO)				<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 49.8	50.0
Total TPH				<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 49.8	50.0

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*Holly Taylor*

Holly Taylor  
Project Manager



# Certificate of Analysis Summary 656204

Larson and Associates, Inc., Midland, TX

Project Id: 20-0107-03  
Contact: Mark Larson

Project Name: Skeen 2H Pumping Unit

Date Received in Lab: Thu 03.19.2020 09:49  
Report Date: 03.26.2020 13:35  
Project Manager: Holly Taylor

Analysis Requested		Lab Id: Field Id: Depth:	656204-025 S-3 (2)	656204-026 S-3 (5')	656204-027 S-3 (8)	656204-028 S-3 (10')	
	<b>Matrix:</b> <i>SOIL</i>	<b>Sampled:</b> 03.18.2020 10:15	03.18.2020 10:16	03.18.2020 10:20	03.18.2020 10:21		
<b>Chloride by EPA 300</b>	<b>Extracted:</b> 03.20.2020 17:00	<b>Analyzed:</b> 03.21.2020 01:26	03.20.2020 17:00 03.21.2020 01:47	03.20.2020 17:00 03.21.2020 01:54	03.20.2020 17:00 03.21.2020 02:01		
	<b>Units/RL:</b> mg/kg	<b>Units/RL:</b> RL	mg/kg	RL	mg/kg	RL	
Chloride	323	4.98	95.4	4.98	19.6	5.02	14.6
<b>TPH by SW8015 Mod</b>	<b>Extracted:</b> 03.20.2020 11:00	<b>Analyzed:</b> 03.20.2020 15:10	03.20.2020 11:00 03.20.2020 15:31	03.20.2020 11:00 03.20.2020 15:52	03.20.2020 11:00 03.20.2020 16:13		
	<b>Units/RL:</b> mg/kg	<b>Units/RL:</b> RL	mg/kg	RL	mg/kg	RL	
Gasoline Range Hydrocarbons (GRo)	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.8
Diesel Range Organics (DRO)	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.8
Motor Oil Range Hydrocarbons (MRO)	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.8
Total TPH	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.8

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Holly Taylor  
Project Manager

# Analytical Report 656204

for

**Larson and Associates, Inc.**

**Project Manager: Mark Larson**

**Skeen 2H Pumping Unit**

**20-0107-03**

**03.26.2020**

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)



03.26.2020

Project Manager: **Mark Larson**

**Larson and Associates, Inc.**

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **656204**

**Skeen 2H Pumping Unit**

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) 656204. 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. 656204 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,

A handwritten signature in black ink that reads "Holly Taylor".

---

**Holly Taylor**

Project Manager

*A Small Business and Minority Company*

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## Sample Cross Reference 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-1 (2')	S	03.17.2020 12:55		656204-001
S-1 (3')	S	03.17.2020 12:56		656204-002
S-1 (5')	S	03.17.2020 13:05		656204-003
S-1 (10')	S	03.17.2020 13:06		656204-004
S-7 (2')	S	03.17.2020 13:18		656204-005
S-7 (3')	S	03.17.2020 13:19		656204-006
S-7 (5')	S	03.17.2020 13:24		656204-007
S-7 (7.5')	S	03.17.2020 13:25		656204-008
S-9 (0.5')	S	03.17.2020 13:23		656204-009
S-9 (1')	S	03.17.2020 12:28		656204-010
S-10 (0.5')	S	03.17.2020 13:12		656204-011
S-10 (1')	S	03.17.2020 13:16		656204-012
S-4 (2')	S	03.17.2020 13:44		656204-013
S-4 (3')	S	03.17.2020 13:45		656204-014
S-4 (5')	S	03.17.2020 14:01		656204-015
S-4 (7.5')	S	03.17.2020 14:02		656204-016
S-6 (2')	S	03.17.2020 14:14		656204-017
S-6 (4')	S	03.17.2020 14:15		656204-018
S-6 (5')	S	03.17.2020 14:17		656204-019
S-6 (8')	S	03.17.2020 14:18		656204-020
S-2 (2')	S	03.18.2020 10:02		656204-021
S-2 (3')	S	03.18.2020 10:03		656204-022
S-2 (5')	S	03.18.2020 10:06		656204-023
S-2 (8')	S	03.18.2020 10:07		656204-024
S-3 (2')	S	03.18.2020 10:15		656204-025
S-3 (5')	S	03.18.2020 10:16		656204-026
S-3 (8')	S	03.18.2020 10:20		656204-027
S-3 (10')	S	03.18.2020 10:21		656204-028



## CASE NARRATIVE

**Client Name:** Larson and Associates, Inc.

**Project Name:** Skeen 2H Pumping Unit

Project ID: 20-0107-03  
Work Order Number(s): 656204

Report Date: 03.26.2020  
Date Received: 03.19.2020

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### Sample receipt non conformances and comments:

### Sample receipt non conformances and comments per sample:

None

#### Analytical non conformances and comments:

Batch: LBA-3120695 BTEX by EPA 8021B

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

Batch: LBA-3120949 BTEX by EPA 8021B

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



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-1 (2')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-001

Date Collected: 03.17.2020 12:55

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:05

Basis: Wet Weight

Seq Number: 3120518

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	123	49.7	mg/kg	03.20.2020 13:52		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1

## Surrogate

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.20.2020 13:04	
o-Terphenyl	84-15-1	105	%	70-135	03.20.2020 13:04	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-1 (3')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-002

Date Collected: 03.17.2020 12:56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120611

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.00	4.98	mg/kg	03.23.2020 14:32		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 14:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 14:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 14:07	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 14:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	87	%	70-135	03.20.2020 14:07		
o-Terphenyl	84-15-1	93	%	70-135	03.20.2020 14:07		



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-1 (5')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-003

Date Collected: 03.17.2020 13:05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120611

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>5.88</b>	4.99	mg/kg	03.23.2020 14:38		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 14:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 14:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 14:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 14:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.20.2020 14:28	
o-Terphenyl	84-15-1	99	%	70-135	03.20.2020 14:28	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-1 (10')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-004

Date Collected: 03.17.2020 13:06

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120611

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.5	4.97	mg/kg	03.23.2020 14:44		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 14:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 14:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 14:49	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 14:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-135	03.20.2020 14:49		
o-Terphenyl	84-15-1	103	%	70-135	03.20.2020 14:49		



# Certificate of Analytical Results 656204

**Larson and Associates, Inc., Midland, TX**

Skeen 2H Pumping Unit

Sample Id: **S-7 (2')** Matrix: **Soil** Date Received: 03.19.2020 09:49  
Lab Sample Id: **656204-005** Date Collected: 03.17.2020 13:18  
  
Analytical Method: **Chloride by EPA 300** Prep Method: **E300P**  
Tech: **CHE** % Moisture:  
Analyst: **CHE** Date Prep: **03.20.2020 11:05** Basis: **Wet Weight**  
Seq Number: **3120518**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>478</b>	50.5	mg/kg	03.20.2020 14:17		10



# Certificate of Analytical Results 656204

**Larson and Associates, Inc., Midland, TX**

Skeen 2H Pumping Unit

Sample Id: **S-7 (3')** Matrix: **Soil** Date Received: 03.19.2020 09:49  
Lab Sample Id: 656204-006 Date Collected: 03.17.2020 13:19

Analytical Method: Chloride by EPA 300 Prep Method: E300P  
Tech: CHE % Moisture:  
Analyst: CHE Basis: Wet Weight  
Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>61.6</b>	49.7	mg/kg	03.20.2020 15:21		10



# Certificate of Analytical Results 656204

**Larson and Associates, Inc., Midland, TX**

Skeen 2H Pumping Unit

Sample Id: **S-7 (5')** Matrix: **Soil** Date Received: 03.19.2020 09:49  
Lab Sample Id: **656204-007** Date Collected: 03.17.2020 13:24  
  
Analytical Method: **Chloride by EPA 300** Prep Method: **E300P**  
Tech: **CHE** % Moisture:  
Analyst: **CHE** Date Prep: **03.20.2020 11:15** Basis: **Wet Weight**  
Seq Number: **3120520**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.20.2020 18:38	U	1



# Certificate of Analytical Results 656204

**Larson and Associates, Inc., Midland, TX**

Skeen 2H Pumping Unit

Sample Id: **S-7 (7.5')** Matrix: **Soil** Date Received: 03.19.2020 09:49  
Lab Sample Id: **656204-008** Date Collected: 03.17.2020 13:25  
  
Analytical Method: **Chloride by EPA 300** Prep Method: **E300P**  
Tech: **CHE** % Moisture:  
Analyst: **CHE** Date Prep: **03.20.2020 11:15** Basis: **Wet Weight**  
Seq Number: **3120520**

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	03.20.2020 18:44	U	1



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-9 (0.5')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-009

Date Collected: 03.17.2020 13:23

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	03.20.2020 18:50	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 16:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 16:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 16:34	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 16:34	U	1

## Surrogate

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.20.2020 16:34	
o-Terphenyl	84-15-1	96	%	70-135	03.20.2020 16:34	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-9 (0.5')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-009

Date Collected: 03.17.2020 13:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.23.2020 16:00

Basis: Wet Weight

Seq Number: 3120695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.23.2020 22:49	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.23.2020 22:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.23.2020 22:49		
4-Bromofluorobenzene	460-00-4	112	%	70-130	03.23.2020 22:49		



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-9 (1')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-010

Date Collected: 03.17.2020 12:28

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	03.20.2020 18:57	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 16:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 16:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 16:55	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 16:55	U	1

## Surrogate

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.20.2020 16:55	
o-Terphenyl	84-15-1	98	%	70-135	03.20.2020 16:55	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-9 (1')**

Matrix: **Soil**

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-010

Date Collected: 03.17.2020 12:28

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: **KTL**

% Moisture:

Analyst: **KTL**

Date Prep: 03.23.2020 16:00

Basis: **Wet Weight**

Seq Number: 3120695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.23.2020 23:09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.23.2020 23:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromoiodobenzene	460-00-4	115	%	70-130	03.23.2020 23:09		
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.23.2020 23:09		



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-10 (0.5")**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-011

Date Collected: 03.17.2020 13:12

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.5	5.05	mg/kg	03.20.2020 19:03		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 17:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 17:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 17:37	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 17:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.20.2020 17:37	
o-Terphenyl	84-15-1	97	%	70-135	03.20.2020 17:37	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-10 (0.5")**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-011

Date Collected: 03.17.2020 13:12

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.23.2020 16:00

Basis: Wet Weight

Seq Number: 3120695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.23.2020 23:30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.23.2020 23:30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.23.2020 23:30		
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.23.2020 23:30		



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-10 (1')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-012

Date Collected: 03.17.2020 13:16

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>18.0</b>	5.05	mg/kg	03.20.2020 19:09		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 17:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 17:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 17:58	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 17:58	U	1

## Surrogate

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.20.2020 17:58	
o-Terphenyl	84-15-1	92	%	70-135	03.20.2020 17:58	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-10 (1')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-012

Date Collected: 03.17.2020 13:16

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.25.2020 16:00

Basis: Wet Weight

Seq Number: 3120949

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.25.2020 20:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.25.2020 20:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromoiodobenzene	460-00-4	107	%	70-130	03.25.2020 20:35		
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.25.2020 20:35		



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-4 (2')

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-013

Date Collected: 03.17.2020 13:44

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	114	25.1	mg/kg	03.20.2020 16:18		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 18:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 18:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 18:19	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 18:19	U	1

## Surrogate

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.20.2020 18:19	
o-Terphenyl	84-15-1	106	%	70-135	03.20.2020 18:19	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-4 (3')

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-014

Date Collected: 03.17.2020 13:45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	43.8	4.97	mg/kg	03.20.2020 19:16		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 18:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 18:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 18:39	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 18:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.20.2020 18:39	
o-Terphenyl	84-15-1	93	%	70-135	03.20.2020 18:39	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-4 (5')

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-015

Date Collected: 03.17.2020 14:01

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	61.3	50.5	mg/kg	03.20.2020 16:50		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 19:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 19:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 19:00	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 19:00	U	1

## Surrogate

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.20.2020 19:00	
o-Terphenyl	84-15-1	107	%	70-135	03.20.2020 19:00	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-4 (7.5') Matrix: Soil Date Received:03.19.2020 09:49  
Lab Sample Id: 656204-016 Date Collected: 03.17.2020 14:02  
Analytical Method: Chloride by EPA 300 Prep Method: E300P  
Tech: CHE % Moisture:  
Analyst: CHE Date Prep: 03.20.2020 11:15 Basis: Wet Weight  
Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	40.1	4.96	mg/kg	03.20.2020 19:22		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
Tech: DVM % Moisture:  
Analyst: ARM Date Prep: 03.20.2020 11:00 Basis: Wet Weight  
Seq Number: 3120516

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 19:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 19:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 19:21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 19:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.20.2020 19:21	
o-Terphenyl	84-15-1	103	%	70-135	03.20.2020 19:21	



# Certificate of Analytical Results 656204

**Larson and Associates, Inc., Midland, TX**

Skeen 2H Pumping Unit

Sample Id: **S-6 (2')** Matrix: **Soil** Date Received: 03.19.2020 09:49  
Lab Sample Id: 656204-017 Date Collected: 03.17.2020 14:14  
Analytical Method: Chloride by EPA 300 Prep Method: E300P  
Tech: CHE % Moisture:  
Analyst: CHE Basis: Wet Weight  
Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	387	50.0	mg/kg	03.20.2020 17:15		10



# Certificate of Analytical Results 656204

**Larson and Associates, Inc., Midland, TX**

Skeen 2H Pumping Unit

Sample Id: **S-6 (4')** Matrix: **Soil** Date Received: 03.19.2020 09:49  
Lab Sample Id: 656204-018 Date Collected: 03.17.2020 14:15  
Analytical Method: Chloride by EPA 300 Prep Method: E300P  
Tech: CHE % Moisture:  
Analyst: CHE Basis: Wet Weight  
Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	98.3	50.3	mg/kg	03.20.2020 17:21		10



# Certificate of Analytical Results 656204

**Larson and Associates, Inc., Midland, TX**

Skeen 2H Pumping Unit

Sample Id: **S-6 (5')** Matrix: **Soil** Date Received: 03.19.2020 09:49  
Lab Sample Id: 656204-019 Date Collected: 03.17.2020 14:17  
Analytical Method: Chloride by EPA 300 Prep Method: E300P  
Tech: CHE % Moisture:  
Analyst: CHE Basis: Wet Weight  
Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	307	49.5	mg/kg	03.20.2020 17:28		10



# Certificate of Analytical Results 656204

**Larson and Associates, Inc., Midland, TX**

Skeen 2H Pumping Unit

Sample Id: **S-6 (8')** Matrix: **Soil** Date Received: 03.19.2020 09:49  
Lab Sample Id: 656204-020 Date Collected: 03.17.2020 14:18  
Analytical Method: Chloride by EPA 300 Prep Method: E300P  
Tech: CHE % Moisture:  
Analyst: CHE Basis: Wet Weight  
Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	475	49.5	mg/kg	03.20.2020 17:34		10



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-2 (2')**

Matrix: **Soil**

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-021

Date Collected: 03.18.2020 10:02

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: 03.20.2020 11:15

Basis: **Wet Weight**

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>591</b>	49.5	mg/kg	03.20.2020 17:40		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: 03.20.2020 11:00

Basis: **Wet Weight**

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 13:04	U	1

**Surrogate**

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	03.20.2020 13:04	
o-Terphenyl	84-15-1	83	%	70-135	03.20.2020 13:04	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-2 (3')

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-022

Date Collected: 03.18.2020 10:03

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.20.2020 11:15

Basis: Wet Weight

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	373	50.4	mg/kg	03.20.2020 17:47		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 14:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 14:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 14:07	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 14:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.20.2020 14:07	
o-Terphenyl	84-15-1	107	%	70-135	03.20.2020 14:07	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-2 (5')**

Matrix: **Soil**

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-023

Date Collected: 03.18.2020 10:06

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: 03.20.2020 11:15

Basis: **Wet Weight**

Seq Number: 3120520

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>344</b>	49.9	mg/kg	03.20.2020 17:53		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: 03.20.2020 11:00

Basis: **Wet Weight**

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 14:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 14:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 14:28	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 14:28	U	1

**Surrogate**

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.20.2020 14:28	
o-Terphenyl	84-15-1	96	%	70-135	03.20.2020 14:28	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-2 (8')**

Matrix: **Soil**

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-024

Date Collected: 03.18.2020 10:07

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: **CHE**

% Moisture:

Analyst: **CHE**

Date Prep: 03.20.2020 11:05

Basis: **Wet Weight**

Seq Number: 3120518

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>261</b>	49.9	mg/kg	03.20.2020 14:24		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: **DVM**

% Moisture:

Analyst: **ARM**

Date Prep: 03.20.2020 11:00

Basis: **Wet Weight**

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 14:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 14:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 14:49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 14:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.20.2020 14:49	
o-Terphenyl	84-15-1	92	%	70-135	03.20.2020 14:49	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-3 (2')

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-025

Date Collected: 03.18.2020 10:15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.20.2020 17:00

Basis: Wet Weight

Seq Number: 3120530

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	323	4.98	mg/kg	03.21.2020 01:26		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.20.2020 15:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.20.2020 15:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.20.2020 15:10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.20.2020 15:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.20.2020 15:10	
o-Terphenyl	84-15-1	97	%	70-135	03.20.2020 15:10	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-3 (5')

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-026

Date Collected: 03.18.2020 10:16

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.20.2020 17:00

Basis: Wet Weight

Seq Number: 3120530

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	95.4	4.98	mg/kg	03.21.2020 01:47		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.20.2020 15:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.20.2020 15:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.20.2020 15:31	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.20.2020 15:31	U	1

## Surrogate

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.20.2020 15:31	
o-Terphenyl	84-15-1	94	%	70-135	03.20.2020 15:31	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: S-3 (8')

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-027

Date Collected: 03.18.2020 10:20

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.20.2020 17:00

Basis: Wet Weight

Seq Number: 3120530

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.6	5.02	mg/kg	03.21.2020 01:54		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 15:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 15:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 15:52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 15:52	U	1

## Surrogate

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.20.2020 15:52	
o-Terphenyl	84-15-1	100	%	70-135	03.20.2020 15:52	



# Certificate of Analytical Results 656204

Larson and Associates, Inc., Midland, TX

Skeen 2H Pumping Unit

Sample Id: **S-3 (10')**

Matrix: Soil

Date Received: 03.19.2020 09:49

Lab Sample Id: 656204-028

Date Collected: 03.18.2020 10:21

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.20.2020 17:00

Basis: Wet Weight

Seq Number: 3120530

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.6	5.03	mg/kg	03.21.2020 02:01		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.20.2020 11:00

Basis: Wet Weight

Seq Number: 3120514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.20.2020 16:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.20.2020 16:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.20.2020 16:13	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.20.2020 16:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.20.2020 16:13	
o-Terphenyl	84-15-1	105	%	70-135	03.20.2020 16:13	



## 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 656204

## Larson and Associates, Inc.

Skeen 2H Pumping Unit

**Analytical Method: Chloride by EPA 300**

Seq Number:	3120518	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7699379-1-BLK	LCS Sample Id: 7699379-1-BKS				Date Prep: 03.20.2020			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	<5.00	250	250	100	249	100	90-110	0	20
								mg/kg	03.20.2020 11:20

**Analytical Method: Chloride by EPA 300**

Seq Number:	3120520	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7699381-1-BLK	LCS Sample Id: 7699381-1-BKS				Date Prep: 03.20.2020			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	<5.00	250	250	100	250	100	90-110	0	20
								mg/kg	03.20.2020 14:49

**Analytical Method: Chloride by EPA 300**

Seq Number:	3120530	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7699443-1-BLK	LCS Sample Id: 7699443-1-BKS				Date Prep: 03.20.2020			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	<5.00	250	258	103	257	103	90-110	0	20
								mg/kg	03.20.2020 23:05

**Analytical Method: Chloride by EPA 300**

Seq Number:	3120611	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7699487-1-BLK	LCS Sample Id: 7699487-1-BKS				Date Prep: 03.23.2020			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	<5.00	250	253	101	255	102	90-110	1	20
								mg/kg	03.23.2020 13:19

**Analytical Method: Chloride by EPA 300**

Seq Number:	3120518	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	656195-004	MS Sample Id: 656195-004 S				Date Prep: 03.20.2020			
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	766	1260	2060	103	2060	103	90-110	0	20
								mg/kg	03.20.2020 18:00

**Analytical Method: Chloride by EPA 300**

Seq Number:	3120518	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	656199-004	MS Sample Id: 656199-004 S				Date Prep: 03.20.2020			
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	1770	1250	3090	106	3100	106	90-110	0	20
								mg/kg	03.20.2020 18:12

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

[D] = 100\*(C-A) / B  
RPD = 200\* | (C-E) / (C+E) |  
[D] = 100 \* (C) / [B]  
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 656204

## Larson and Associates, Inc. Skeen 2H Pumping Unit

**Analytical Method: Chloride by EPA 300**

Seq Number: 3120520

Parent Sample Id: 656199-008

Matrix: Soil

MS Sample Id: 656199-008 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656199-008 SD

**Parameter**

Parent Result

Spike Amount

MS Result

MS %Rec

MSD Result

MSD %Rec

Limits

%RPD

RPD Limit

Units

Analysis Date

Flag

Chloride

58.9

249

303

98

305

99

90-110

1

20

mg/kg

03.20.2020 16:37

**Analytical Method: Chloride by EPA 300**

Seq Number: 3120520

Parent Sample Id: 656251-002

Matrix: Soil

MS Sample Id: 656251-002 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656251-002 SD

**Parameter**

Parent Result

Spike Amount

MS Result

MS %Rec

MSD Result

MSD %Rec

Limits

%RPD

RPD Limit

Units

Analysis Date

Flag

Chloride

2.96

251

254

100

252

99

90-110

1

20

mg/kg

03.20.2020 15:08

**Analytical Method: Chloride by EPA 300**

Seq Number: 3120530

Parent Sample Id: 656361-019

Matrix: Soil

MS Sample Id: 656361-019 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656361-019 SD

**Parameter**

Parent Result

Spike Amount

MS Result

MS %Rec

MSD Result

MSD %Rec

Limits

%RPD

RPD Limit

Units

Analysis Date

Flag

Chloride

194

250

449

102

435

96

90-110

3

20

mg/kg

03.20.2020 23:26

**Analytical Method: Chloride by EPA 300**

Seq Number: 3120530

Parent Sample Id: 656361-028

Matrix: Soil

MS Sample Id: 656361-028 S

Prep Method: E300P

Date Prep: 03.20.2020

MSD Sample Id: 656361-028 SD

**Parameter**

Parent Result

Spike Amount

MS Result

MS %Rec

MSD Result

MSD %Rec

Limits

%RPD

RPD Limit

Units

Analysis Date

Flag

Chloride

95.9

248

353

104

325

92

90-110

8

20

mg/kg

03.21.2020 01:05

**Analytical Method: Chloride by EPA 300**

Seq Number: 3120611

Parent Sample Id: 656464-002

Matrix: Soil

MS Sample Id: 656464-002 S

Prep Method: E300P

Date Prep: 03.23.2020

MSD Sample Id: 656464-002 SD

**Parameter**

Parent Result

Spike Amount

MS Result

MS %Rec

MSD Result

MSD %Rec

Limits

%RPD

RPD Limit

Units

Analysis Date

Flag

Chloride

22.8

249

280

103

280

103

90-110

0

20

mg/kg

03.23.2020 15:02

**Analytical Method: Chloride by EPA 300**

Seq Number: 3120611

Parent Sample Id: 656464-007

Matrix: Soil

MS Sample Id: 656464-007 S

Prep Method: E300P

Date Prep: 03.23.2020

MSD Sample Id: 656464-007 SD

**Parameter**

Parent Result

Spike Amount

MS Result

MS %Rec

MSD Result

MSD %Rec

Limits

%RPD

RPD Limit

Units

Analysis Date

Flag

Chloride

57.4

250

312

102

304

99

90-110

3

20

mg/kg

03.23.2020 13:37

 MS/MSD Percent Recovery  
 Relative Percent Difference  
 LCS/LCSD Recovery  
 Log Difference

 $[D] = 100 * (C-A) / B$   
 $RPD = 200 * |(C-E) / (C+E)|$   
 $[D] = 100 * (C) / [B]$   
 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 656204

## Larson and Associates, Inc. Skeen 2H Pumping Unit

**Analytical Method:** TPH by SW8015 Mod

Seq Number: 3120514

MB Sample Id: 7699386-1-BLK

Matrix: Solid

LCS Sample Id: 7699386-1-BKS

Prep Method: SW8015P

Date Prep: 03.20.2020

LCSD Sample Id: 7699386-1-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	840	84	822	82	70-135	2	20	mg/kg	03.20.2020 12:21	
Diesel Range Organics (DRO)	<50.0	1000	864	86	862	86	70-135	0	20	mg/kg	03.20.2020 12:21	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane	77		78		77		70-135			%	03.20.2020 12:21	
o-Terphenyl	84		84		83		70-135			%	03.20.2020 12:21	

**Analytical Method:** TPH by SW8015 Mod

Seq Number: 3120516

MB Sample Id: 7699382-1-BLK

Matrix: Solid

LCS Sample Id: 7699382-1-BKS

Prep Method: SW8015P

Date Prep: 03.20.2020

LCSD Sample Id: 7699382-1-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	852	85	857	86	70-135	1	20	mg/kg	03.20.2020 12:21	
Diesel Range Organics (DRO)	<50.0	1000	936	94	919	92	70-135	2	20	mg/kg	03.20.2020 12:21	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane	89		89		89		70-135			%	03.20.2020 12:21	
o-Terphenyl	101		98		97		70-135			%	03.20.2020 12:21	

**Analytical Method:** TPH by SW8015 Mod

Seq Number: 3120514

Matrix: Solid

MB Sample Id: 7699386-1-BLK

Prep Method: SW8015P

Date Prep: 03.20.2020

Parameter	MB Result		Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0		mg/kg	03.20.2020 12:00	

**Analytical Method:** TPH by SW8015 Mod

Seq Number: 3120516

Matrix: Solid

MB Sample Id: 7699382-1-BLK

Prep Method: SW8015P

Date Prep: 03.20.2020

Parameter	MB Result		Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0		mg/kg	03.20.2020 12:00	

MS/MSD Percent Recovery  
 Relative Percent Difference  
 LCS/LCSD Recovery  
 Log Difference

$[D] = 100 * (C-A) / B$   
 $RPD = 200 * |(C-E) / (C+E)|$   
 $[D] = 100 * (C) / [B]$   
 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 656204

## Larson and Associates, Inc. Skeen 2H Pumping Unit

**Analytical Method:** TPH by SW8015 Mod

Seq Number: 3120514

Parent Sample Id: 656204-021

Matrix: Soil

Prep Method: SW8015P

Date Prep: 03.20.2020

MSD Sample Id: 656204-021 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	839	84	878	88	70-135	5	20	mg/kg	03.20.2020 13:25	
Diesel Range Organics (DRO)	<49.9	997	890	89	953	95	70-135	7	20	mg/kg	03.20.2020 13:25	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1-Chlorooctane			85			88			70-135	%	03.20.2020 13:25	
o-Terphenyl			90			96			70-135	%	03.20.2020 13:25	

**Analytical Method:** TPH by SW8015 Mod

Seq Number: 3120516

Parent Sample Id: 656204-001

Matrix: Soil

Prep Method: SW8015P

Date Prep: 03.20.2020

MSD Sample Id: 656204-001 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)	<49.9	998	886	89	895	90	70-135	1	20	mg/kg	03.20.2020 13:25	
Diesel Range Organics (DRO)	<49.9	998	965	97	974	98	70-135	1	20	mg/kg	03.20.2020 13:25	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1-Chlorooctane			94			98			70-135	%	03.20.2020 13:25	
o-Terphenyl			103			104			70-135	%	03.20.2020 13:25	

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 3120695

MB Sample Id: 7699582-1-BLK

Matrix: Solid

Prep Method: SW5030B

Date Prep: 03.23.2020

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	0.0976	98	0.0896	90	70-130	9	35	mg/kg	03.23.2020 18:25	
Toluene	<0.00200	0.100	0.0978	98	0.0896	90	70-130	9	35	mg/kg	03.23.2020 18:25	
Ethylbenzene	<0.00200	0.100	0.0997	100	0.0912	91	70-130	9	35	mg/kg	03.23.2020 18:25	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.181	91	70-130	9	35	mg/kg	03.23.2020 18:25	
o-Xylene	<0.00200	0.100	0.100	100	0.0921	92	70-130	8	35	mg/kg	03.23.2020 18:25	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag				Units	Analysis Date	
1,4-Difluorobenzene	109		111			108			70-130	%	03.23.2020 18:25	
4-Bromofluorobenzene	102		107			105			70-130	%	03.23.2020 18:25	

 MS/MSD Percent Recovery  
 Relative Percent Difference  
 LCS/LCSD Recovery  
 Log Difference

 $[D] = 100 * (C-A) / B$   
 $RPD = 200 * |(C-E) / (C+E)|$   
 $[D] = 100 * (C) / [B]$   
 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 656204

## Larson and Associates, Inc. Skeen 2H Pumping Unit

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 3120949

MB Sample Id: 7699754-1-BLK

Matrix: Solid

LCS Sample Id: 7699754-1-BKS

Prep Method: SW5030B

Date Prep: 03.25.2020

LCSD Sample Id: 7699754-1-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	0.101	101	0.0942	94	70-130	7	35	mg/kg	03.25.2020 18:13	
Toluene	<0.00200	0.100	0.0989	99	0.0924	92	70-130	7	35	mg/kg	03.25.2020 18:13	
Ethylbenzene	<0.00200	0.100	0.0985	99	0.0920	92	70-130	7	35	mg/kg	03.25.2020 18:13	
m,p-Xylenes	<0.00400	0.200	0.195	98	0.182	91	70-130	7	35	mg/kg	03.25.2020 18:13	
o-Xylene	<0.00200	0.100	0.0977	98	0.0916	92	70-130	6	35	mg/kg	03.25.2020 18:13	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag				Units	Analysis Date	
1,4-Difluorobenzene	107		111		108		70-130			%	03.25.2020 18:13	
4-Bromofluorobenzene	93		98		95		70-130			%	03.25.2020 18:13	

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 3120695

Parent Sample Id: 656199-003

Matrix: Soil

MS Sample Id: 656199-003 S

Prep Method: SW5030B

Date Prep: 03.23.2020

MSD Sample Id: 656199-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0868	87	0.0880	87	70-130	1	35	mg/kg	03.23.2020 19:06	
Toluene	<0.00200	0.100	0.0859	86	0.0874	87	70-130	2	35	mg/kg	03.23.2020 19:06	
Ethylbenzene	<0.00200	0.100	0.0854	85	0.0884	88	70-130	3	35	mg/kg	03.23.2020 19:06	
m,p-Xylenes	<0.00401	0.200	0.169	85	0.175	87	70-130	3	35	mg/kg	03.23.2020 19:06	
o-Xylene	<0.00200	0.100	0.0861	86	0.0892	88	70-130	4	35	mg/kg	03.23.2020 19:06	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1,4-Difluorobenzene			109		109		70-130			%	03.23.2020 19:06	
4-Bromofluorobenzene			106		107		70-130			%	03.23.2020 19:06	

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 3120949

Parent Sample Id: 656204-012

Matrix: Soil

MS Sample Id: 656204-012 S

Prep Method: SW5030B

Date Prep: 03.25.2020

MSD Sample Id: 656204-012 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	0.100	0.0911	91	0.0873	88	70-130	4	35	mg/kg	03.25.2020 18:54	
Toluene	<0.00200	0.100	0.0889	89	0.0849	85	70-130	5	35	mg/kg	03.25.2020 18:54	
Ethylbenzene	<0.00200	0.100	0.0868	87	0.0827	83	70-130	5	35	mg/kg	03.25.2020 18:54	
m,p-Xylenes	<0.00401	0.200	0.172	86	0.164	82	70-130	5	35	mg/kg	03.25.2020 18:54	
o-Xylene	<0.00200	0.100	0.0854	85	0.0818	82	70-130	4	35	mg/kg	03.25.2020 18:54	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1,4-Difluorobenzene			109		108		70-130			%	03.25.2020 18:54	
4-Bromofluorobenzene			97		96		70-130			%	03.25.2020 18:54	

MS/MSD Percent Recovery  
 Relative Percent Difference  
 LCS/LCSD Recovery  
 Log Difference

[D] = 100\*(C-A) / B  
 RPD = 200\* | (C-E) / (C+E) |  
 [D] = 100 \* (C) / [B]  
 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

Nº 124

## CHAIN-OF-CUSTODY

**A**rson &  
ssociates, Inc.

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

Data Bentoed to:

DATE: 3/19/2020  
PO#: \_\_\_\_\_  
PROJECT LOCATION OR NAME: \_\_\_\_\_ L

PAGE 1 OF 2

Data Reported to:						
TRRP report? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		TIME ZONE: Time zone/State: <b>MS-T</b>		Project Location or Name: <b>Skew &amp; Humping Unit</b>		
Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION
S-1 (3')		3/17/20	1255	S	1	HCl
S-1 (3')					1	HNO <sub>3</sub>
S-1 (5')					1	H <sub>2</sub> SO <sub>4</sub>
S-1 (10')					1	NaOH
S-7 (2')					1	ICE
S-7 (3')					1	UNPRESERVED
S-7 (5')					1	
S-7 (7.5')					1	
S-9 (0.5')					1	
S-9 (1')					1	
S-10 (6.5')					1	
S-10 (1')					1	
S-4 (2')					1	
S-4 (3')					1	
S-4 (5')					1	
TOTAL					15	
<b>RELINQUISHED BY:</b> (Signature) <b>RECEIVED BY:</b> (Signature)						
RELINQUISHED BY: (Signature) DATE/TIME: 3/19/2019 RECEIVED BY: (Signature)						
RELINQUISHED BY: (Signature) DATE/TIME: 3/19/2019 RECEIVED BY: (Signature)						
LABORATORY: <b>XENCO</b>						
TURN AROUND TIME NORMAL <input checked="" type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> OTHER <input type="checkbox"/>		LABORATORY USE ONLY: RECEIVING TEMP: 60/63 THERM#: 09 CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED <input type="checkbox"/> CARRIER BILL# _____ <input type="checkbox"/> HAND DELIVERED				
ANALYSES BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> TRPH 1005 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> TPH 1006 <input type="checkbox"/> TRPH 418 <input type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> ANALYSTS GASOLINE - MOD 8015 <input type="checkbox"/> DIESEL - MOD 8015 <input type="checkbox"/> OIL - MOD 8015 <input type="checkbox"/> VOC 8260 <input type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> 8151 HERBICIDES <input type="checkbox"/> 8081 PESTICIDES <input type="checkbox"/> OTHER LIST <input type="checkbox"/> 8081 METALS (RCRA) <input type="checkbox"/> TCLP VOC <input type="checkbox"/> 8081 PCBs <input type="checkbox"/> TBLP - METALS (RCRA) <input type="checkbox"/> SEMI-VOC <input type="checkbox"/> TBLP - PEST <input type="checkbox"/> HERB <input type="checkbox"/> TOTAL CHROMIUM <input type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> CYANIDE <input type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> TOTAL % MOISTURE <input type="checkbox"/> FLUORIDE <input type="checkbox"/> PCBs <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> PECHLORATE <input type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> PH <input type="checkbox"/> CHLORIDES <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/> RCI <input type="checkbox"/> TOX <input type="checkbox"/> TOTAL CHLORIDE <input type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> PECHLORATE <input type="checkbox"/> CHLORIDES <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/> FIELD NOTES						

**A**rson &  
ssociates, Inc.  
Environmental Consultants

Environmental Consultants, Inc.

507 N. Marienfeld, Ste. 200  
Midland, TX 79701

# CHAIN-OF-CUSTODY

No. 126

**Arson & Associates, Inc.**  
Environmental Consultants

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

DATE: 3/19/2000 PAGE 2 OF 2

PO#:                          LAB WORK ORDER #:                         

PROJECT LOCATION OR NAME: Skeen art pumping unit

LA PROJECT #: 3D-0107-13 COLLECTOR: NE/ES

Data Reported to:		PROJECT LOCATION OR NAME: <u>Skeen Ah pumping unit</u>		DATE: <u>3/19/2000</u>		PAGE <u>2</u> OF <u>2</u>	
				PO#:			
				LAJ PROJECT #:		<u>3D-0107-03</u>	COLLECTOR: <u>D5/Ec</u>
TIME ZONE: <u>MST</u>		S-SOIL W=WATER A=AIR		P=PAINT SL=SLUDGE OT=OTHER		ANALYSES	
Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> TPH 418.1 <input type="checkbox"/> TPH 1005 <input checked="" type="checkbox"/> TPH 1006 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> TRPH 418.1 <input type="checkbox"/> TPH 1005 <input checked="" type="checkbox"/> TPH 1006 <input type="checkbox"/> GASOLINE - MOD 8015 <input checked="" type="checkbox"/> GASOLINE - MOD 8015 <input type="checkbox"/> DIESSEL - MOD 8015 <input type="checkbox"/> OIL - MOD 8015 <input type="checkbox"/> VOC 82260 <input type="checkbox"/> VOC 82270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> HOLDPAH <input type="checkbox"/> OTHER LIST <input type="checkbox"/> CYANIDE <input type="checkbox"/> TCLP VOC <input type="checkbox"/> Semi-VOC <input type="checkbox"/> OTHER <input type="checkbox"/> CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED <input type="checkbox"/> CARRIER BILL # <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/> CHLORIDE <input type="checkbox"/> PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> HERB <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> % MOISTURE <input type="checkbox"/> PECHLORATE <input type="checkbox"/> TBHP - PCBBS <input type="checkbox"/> TBHP - METALS (RCRA) <input type="checkbox"/> PEST <input type="checkbox"/> TOTAL <input type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> TOX <input type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> RCI <input type="checkbox"/> CHLORIDE <input type="checkbox"/> FIELD NOTES	
S-4 (7.5')	3170	1402	5	1	1	<input checked="" type="checkbox"/> ANALYSES	
S-6 (2')	1414					<input type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> TPH 418.1 <input type="checkbox"/> TPH 1005 <input checked="" type="checkbox"/> TPH 1006 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> TRPH 418.1 <input type="checkbox"/> TPH 1005 <input checked="" type="checkbox"/> TPH 1006 <input type="checkbox"/> GASOLINE - MOD 8015 <input checked="" type="checkbox"/> GASOLINE - MOD 8015 <input type="checkbox"/> DIESSEL - MOD 8015 <input type="checkbox"/> OIL - MOD 8015 <input type="checkbox"/> VOC 82260 <input type="checkbox"/> VOC 82270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/> HOLDPAH <input type="checkbox"/> OTHER LIST <input type="checkbox"/> CYANIDE <input type="checkbox"/> TCLP VOC <input type="checkbox"/> Semi-VOC <input type="checkbox"/> OTHER <input type="checkbox"/> CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED <input type="checkbox"/> CARRIER BILL # <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/> CHLORIDE <input type="checkbox"/> PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> HERB <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> % MOISTURE <input type="checkbox"/> PECHLORATE <input type="checkbox"/> TBHP - PCBBS <input type="checkbox"/> TBHP - METALS (RCRA) <input type="checkbox"/> PEST <input type="checkbox"/> TOTAL <input type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> TOX <input type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> RCI <input type="checkbox"/> CHLORIDE <input type="checkbox"/> FIELD NOTES	
S-6 (3')	1415					<input type="checkbox"/> ANALYSES	
S-6 (5')	1417					<input type="checkbox"/> ANALYSES	
S-6 (6')	1418					<input type="checkbox"/> ANALYSES	
S-2 (2')	3180	1002	1			<input type="checkbox"/> ANALYSES	
S-2 (3')	1003					<input type="checkbox"/> ANALYSES	
S-2 (5')	1006					<input type="checkbox"/> ANALYSES	
S-2 (8')	1007					<input type="checkbox"/> ANALYSES	
S-3 (2')	1015					<input type="checkbox"/> ANALYSES	
S-3 (5')	1016					<input type="checkbox"/> ANALYSES	
S-3 (8')	1020					<input type="checkbox"/> ANALYSES	
S-3 (10')	1021	1	1			<input type="checkbox"/> ANALYSES	
TOTAL	<u>13</u>					<input type="checkbox"/> ANALYSES	
RELINQUISHED BY: (Signature)	<u>Quinton</u>	DATE/TIME	<u>3/19/2000 10:49 AM</u>	RECEIVED BY: (Signature)	<u>John</u>	LABORATORY USE ONLY: <u>Cold</u>	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		RECEIVING TEMP: <u>65</u> THERM# <u>129</u>	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED	
LABORATORY:	Xeno					<input type="checkbox"/> CARRIER BILL # _____	
						<input type="checkbox"/> HAND DELIVERED	
TURN AROUND TIME		LABORATORY USE ONLY:					
NORMAL <input checked="" type="checkbox"/>		RECEIVING TEMP: <u>Cold</u> THERM# <u>129</u>					
1 DAY <input type="checkbox"/>		CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED					
2 DAY <input type="checkbox"/>		<input type="checkbox"/> CARRIER BILL # _____					
OTHER <input type="checkbox"/>		<input type="checkbox"/> HAND DELIVERED					
FIELD NOTES							

**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**

**Client:** Larson and Associates, Inc.

**Date/ Time Received:** 03.19.2020 09.49.00 AM

**Work Order #:** 656204

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
#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:

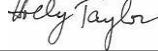
PH Device/Lot#:

**Checklist completed by:**

  
Brianna Teel

Date: 03.19.2020

**Checklist reviewed by:**

  
Holly Taylor

Date: 03.24.2020



# Certificate of Analysis Summary 661563

Larson and Associates, Inc., Midland, TX

**Project Id:** 20-0107-03  
**Contact:** Mark Larson

**Project Name:** Skeen 2H,Chevron

**Date Received in Lab:** Thu 05.14.2020 10:44  
**Report Date:** 05.19.2020 14:02  
**Project Manager:** Holly Taylor

<b>Analysis Requested</b>		<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i>	661563-001 SP-11 (0-0.5') SOIL	661563-002 SP-11 (0.5-1') SOIL	
<b>BTEX by EPA 8021B</b>		<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	05.18.2020 17:00 05.18.2020 21:14 mg/kg RL	05.18.2020 17:00 05.18.2020 21:34 mg/kg RL	
Benzene			<0.00202 0.00202	<0.00200 0.00200	
Toluene			<0.00202 0.00202	<0.00200 0.00200	
Ethylbenzene			<0.00202 0.00202	<0.00200 0.00200	
m,p-Xylenes			<0.00403 0.00403	<0.00399 0.00399	
o-Xylene			<0.00202 0.00202	<0.00200 0.00200	
Total Xylenes			<0.00202 0.00202	<0.00200 0.00200	
Total BTEX			<0.00202 0.00202	<0.00200 0.00200	
<b>Chloride by EPA 300</b>		<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	05.14.2020 15:05 05.15.2020 02:19 mg/kg RL	05.14.2020 15:05 05.15.2020 02:25 mg/kg RL	
Chloride			102 50.0	104 50.2	
<b>TPH by SW8015 Mod</b>		<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	05.14.2020 17:00 05.15.2020 09:31 mg/kg RL	05.14.2020 17:00 05.15.2020 10:28 mg/kg RL	
Gasoline Range Hydrocarbons (GRO)			<50.0 50.0	<50.0 50.0	
Diesel Range Organics (DRO)			<50.0 50.0	<50.0 50.0	
Motor Oil Range Hydrocarbons (MRO)			<50.0 50.0	<50.0 50.0	
Total TPH			<50.0 50.0	<50.0 50.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end user of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Holly Taylor  
Project Manager



# Analytical Report 661563

for

**Larson and Associates, Inc.**

**Project Manager: Mark Larson**

**Skeen 2H,Chevron**

**20-0107-03**

**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): **661563**

**Skeen 2H,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) 661563. 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. 661563 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,

A handwritten signature in black ink that reads "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 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-11 (0-0.5')	S	05.13.2020 11:40		661563-001
SP-11 (0.5-1')	S	05.13.2020 11:43		661563-002



## CASE NARRATIVE

*Client Name: Larson and Associates, Inc.*

*Project Name: Skeen 2H,Chevron*

Project ID: 20-0107-03  
Work Order Number(s): 661563

Report Date: 05.19.2020  
Date Received: 05.14.2020

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**Sample receipt non conformances and comments:**

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**Sample receipt non conformances and comments per sample:**

None



# Certificate of Analytical Results 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id: SP-11 (0-0.5')

Matrix: Soil

Date Received:05.14.2020 10:44

Lab Sample Id: 661563-001

Date Collected: 05.13.2020 11:40

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.14.2020 15:05

Basis: Wet Weight

Seq Number: 3126007

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	102	50.0	mg/kg	05.15.2020 02:19		10

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 09:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.15.2020 09:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.15.2020 09:31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.15.2020 09:31	U	1

## Surrogate

	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-130	05.15.2020 09:31	
o-Terphenyl	84-15-1	105	%	70-130	05.15.2020 09:31	



# Certificate of Analytical Results 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id: SP-11 (0-0.5')

Matrix: Soil

Date Received:05.14.2020 10:44

Lab Sample Id: 661563-001

Date Collected: 05.13.2020 11:40

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 05.18.2020 17:00

Basis: Wet Weight

Seq Number: 3126326

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.18.2020 21:14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.18.2020 21:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromoiodobenzene	460-00-4	111	%	70-130	05.18.2020 21:14		
1,4-Difluorobenzene	540-36-3	115	%	70-130	05.18.2020 21:14		



# Certificate of Analytical Results 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id: **SP-11 (0.5-1')** Matrix: **Soil** Date Received:05.14.2020 10:44  
Lab Sample Id: 661563-002 Date Collected: 05.13.2020 11:43  
Analytical Method: Chloride by EPA 300 Prep Method: E300P  
Tech: CHE % Moisture:  
Analyst: CHE Date Prep: 05.14.2020 15:05 Basis: Wet Weight  
Seq Number: 3126007

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	104	50.2	mg/kg	05.15.2020 02:25		10

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 10:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.15.2020 10:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.15.2020 10:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.15.2020 10:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	05.15.2020 10:28	
o-Terphenyl	84-15-1	102	%	70-130	05.15.2020 10:28	



# Certificate of Analytical Results 661563

Larson and Associates, Inc., Midland, TX

Skeen 2H,Chevron

Sample Id: SP-11 (0.5-1')

Matrix: Soil

Date Received: 05.14.2020 10:44

Lab Sample Id: 661563-002

Date Collected: 05.13.2020 11:43

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 05.18.2020 17:00

Basis: Wet Weight

Seq Number: 3126326

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.18.2020 21:34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.18.2020 21:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromoiodobenzene	460-00-4	110	%	70-130	05.18.2020 21:34		
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.18.2020 21:34		



## 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 661563

## Larson and Associates, Inc.

Skeen 2H,Chevron

**Analytical Method: Chloride by EPA 300**

Seq Number:	3126007	Matrix: Solid						Prep Method: E300P				
MB Sample Id:	7703342-1-BLK	LCS Sample Id: 7703342-1-BKS						Date Prep: 05.14.2020				
<b>Parameter</b>	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	243	97	236	94	90-110	3	20	mg/kg	05.14.2020 23:35	

**Analytical Method: Chloride by EPA 300**

Seq Number:	3126007	Matrix: Soil						Prep Method: E300P				
Parent Sample Id:	661555-004	MS Sample Id: 661555-004 S						Date Prep: 05.14.2020				
<b>Parameter</b>	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	58.4	252	298	95	292	93	90-110	2	20	mg/kg	05.14.2020 23:52	

**Analytical Method: Chloride by EPA 300**

Seq Number:	3126007	Matrix: Soil						Prep Method: E300P				
Parent Sample Id:	661555-011	MS Sample Id: 661555-011 S						Date Prep: 05.14.2020				
<b>Parameter</b>	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	174	249	425	101	426	101	90-110	0	20	mg/kg	05.15.2020 01:16	

**Analytical Method: TPH by SW8015 Mod**

Seq Number:	3126160	Matrix: Solid						Prep Method: SW8015P				
MB Sample Id:	7703367-1-BLK	LCS Sample Id: 7703367-1-BKS						Date Prep: 05.14.2020				
<b>Parameter</b>	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	
<b>Surrogate</b>	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**

Seq Number:	3126160	Matrix: Solid						Prep Method: SW8015P			
MB Sample Id:	7703367-1-BLK							Date Prep: 05.14.2020			
<b>Parameter</b>	MB Result							Units	Analysis Date		Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0							mg/kg	05.15.2020 08:34		

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

[D] = 100\*(C-A) / B  
RPD = 200\* | (C-E) / (C+E) |  
[D] = 100 \* (C) / [B]  
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 661563

**Larson and Associates, Inc.**  
Skeen 2H,Chevron

**Analytical Method:** TPH by SW8015 Mod

Seq Number: 3126160

Parent Sample Id: 661563-001

Matrix: Soil

MS Sample Id: 661563-001 S

Prep Method: SW8015P

Date Prep: 05.14.2020

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				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

Seq Number: 3126326

MB Sample Id: 7703598-1-BLK

Matrix: Solid

LCS Sample Id: 7703598-1-BKS

Prep Method: SW5035A

Date Prep: 05.18.2020

LCSD Sample Id: 7703598-1-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	0.102	102	0.0982	98	70-130	4	35	mg/kg	05.18.2020 17:15	
Toluene	<0.00200	0.100	0.110	110	0.104	104	70-130	6	35	mg/kg	05.18.2020 17:15	
Ethylbenzene	<0.00200	0.100	0.105	105	0.0985	99	70-130	6	35	mg/kg	05.18.2020 17:15	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.197	99	70-130	6	35	mg/kg	05.18.2020 17:15	
o-Xylene	<0.00200	0.100	0.101	101	0.0943	94	70-130	7	35	mg/kg	05.18.2020 17:15	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag				Units	Analysis Date	
1,4-Difluorobenzene	104		104			104			70-130	%	05.18.2020 17:15	
4-Bromofluorobenzene	90		101			100			70-130	%	05.18.2020 17:15	

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 3126326

Parent Sample Id: 661896-001

Matrix: Soil

MS Sample Id: 661896-001 S

Prep Method: SW5035A

Date Prep: 05.18.2020

MSD Sample Id: 661896-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0910	91	0.100	100	70-130	9	35	mg/kg	05.18.2020 18:08	
Toluene	<0.00199	0.0996	0.0856	86	0.0978	98	70-130	13	35	mg/kg	05.18.2020 18:08	
Ethylbenzene	<0.00199	0.0996	0.0700	70	0.0860	86	70-130	21	35	mg/kg	05.18.2020 18:08	
m,p-Xylenes	<0.00398	0.199	0.141	71	0.173	87	70-130	20	35	mg/kg	05.18.2020 18:08	
o-Xylene	<0.00199	0.0996	0.0668	67	0.0828	83	70-130	21	35	mg/kg	05.18.2020 18:08	X
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1,4-Difluorobenzene			107			108			70-130	%	05.18.2020 18:08	
4-Bromofluorobenzene			99			94			70-130	%	05.18.2020 18:08	

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

[D] = 100\*(C-A) / B  
RPD = 200\* | (C-E) / (C+E) |  
[D] = 100 \* (C) / [B]  
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

No 1152

**Harrison & Associates, Inc.**  
Environmental Consultants

Data Reported to:

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

DATE: **5/14/20**

PO#:

PROJECT LOCATION OR NAME: **Skidpad, Chevron**LA PROJECT #: **2D-0107-03**PAGE **1** OF **1**

LAB WORK ORDER#:

COLLECTOR:

**R0**

RECEIVED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		TURN AROUND TIME		LABORATORY USE ONLY:	
<b>Rocky Owen</b>		5/14/2014 11:40 AM				<b>NORMAL</b>		RECEIVING TEMP: <b>34.133</b> THERM#: <b>Ref</b>	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		1 DAY <input checked="" type="checkbox"/>		CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		2 DAY <input type="checkbox"/>		<input type="checkbox"/> CARRIER BILL # _____	
LABORATORY						OTHER <input type="checkbox"/>		<input type="checkbox"/> HAND DELIVERED	
TOTAL <b>2</b>									
<b>ANALYSES</b> BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> TRPH 4181 <input type="checkbox"/> MOD 8015 <input checked="" type="checkbox"/> HOLDPAH <input type="checkbox"/> HERBICIDES <input type="checkbox"/> GASOLINE - MOD 8015 <input type="checkbox"/> DIESEL - MOD 8015 <input type="checkbox"/> OIL - MOD 8015 <input type="checkbox"/> VOC 8260 <input type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> 8151 <input type="checkbox"/> CYANIDE <input type="checkbox"/> OTHER LIST <input type="checkbox"/> TCLP VOC <input type="checkbox"/> Semi-VOC <input type="checkbox"/> OTHER <input type="checkbox"/> TCLP <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> TOTAL METALS (RCRA) <input type="checkbox"/> HERB <input type="checkbox"/> PCBs <input type="checkbox"/> PCP <input type="checkbox"/> PEST <input type="checkbox"/> METALS (RCRA) <input type="checkbox"/> % MOISTURE <input type="checkbox"/> CHROMIUM <input type="checkbox"/> TOX <input type="checkbox"/> LEAD - TOTAL <input type="checkbox"/> RC <input type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/> CHLORIDE <b>45.300</b> FIELD NOTES									

**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 #:** 661563

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:

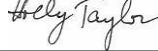
PH Device/Lot#:

**Checklist completed by:**

  
Brianna Teel

Date: 05.14.2020

**Checklist reviewed by:**

  
Holly Taylor

Date: 05.18.2020

# Certificate of Analysis Summary 678851

**Project Id:** 20-0107-03      **Contact:** Mark Larson

**Project Location:**

Date Received in Lab: Mon 11.23.2020 16:36

Report Date: 11.30.2020 14:06

Project Manager: Holly Taylor

## Project Name: Hayhurst Soil Pile- Skeen Back Fill

<i>Analysis Requested</i>	<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	
<b>BTEX by EPA 8021B</b>	678851-001 C-1 SOIL 11.23.2020 09:30		
Benzene		11.24.2020 15:36 mg/kg <0.00200 0.00200	
Toluene		11.24.2020 22:35 mg/kg <0.00200 0.00200	
Ethylbenzene		11.24.2020 22:35 mg/kg <0.00200 0.00200	
m,p-Xylenes		11.24.2020 22:35 mg/kg <0.00399 0.00399	
o-Xylene		11.24.2020 22:35 mg/kg <0.00200 0.00200	
Total Xylenes		11.24.2020 22:35 mg/kg <0.002000 0.002000	
Total BTEX		11.24.2020 22:35 mg/kg <0.002000 0.002000	
<b>Chloride by EPA 300</b>	11.24.2020 14:00 mg/kg 11.24.2020 18:54 mg/kg RL		
Chloride		<49.9 49.9	
<b>TPH by SW8015 Mod</b>	11.24.2020 12:30 mg/kg 11.24.2020 14:46 mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	
Diesel Range Organics (DRO)		<50.1 50.1	
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	
Total TPH		<50.10 50.10	

BRL - Below Reporting Limit

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

Holly Taylor

# Analytical Report 678851

for

**Larson and Associates, Inc.**

**Project Manager: Mark Larson**

**Hayhurst Soil Pile- Skeen Back Fill**

**20-0107-03**

**11.30.2020**

Collected By: Client

**1089 N Canal Street  
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)  
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)  
Xenco-Tampa: Florida (E87429), North Carolina (483)

11.30.2020

Project Manager: **Mark Larson**

**Larson and Associates, Inc.**

P. O. Box 50685

Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **678851**

**Hayhurst Soil Pile- Skeen Back Fill**

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 Eurofins Xenco, LLC Report Number(s) 678851. 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 Eurofins Xenco, LLC. 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. 678851 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,



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**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 678851

**Larson and Associates, Inc., Midland, TX**

Hayhurst Soil Pile- Skeen Back Fill

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C-1	S	11.23.2020 09:30		678851-001

## CASE NARRATIVE

***Client Name: Larson and Associates, Inc.***

***Project Name: Hayhurst Soil Pile- Skeen Back Fill***

Project ID: 20-0107-03  
Work Order Number(s): 678851

Report Date: 11.30.2020  
Date Received: 11.23.2020

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**Sample receipt non conformances and comments:**

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**Sample receipt non conformances and comments per sample:**

None

# Certificate of Analytical Results 678851

## Larson and Associates, Inc., Midland, TX

Hayhurst Soil Pile- Skeen Back Fill

Sample Id: C-1 Matrix: Soil Date Received: 11.23.2020 16:36  
 Lab Sample Id: 678851-001 Date Collected: 11.23.2020 09:30  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB  
 Analyst: MAB Date Prep: 11.24.2020 14:00 % Moisture:  
 Seq Number: 3143277 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<49.9	49.9	mg/kg	11.24.2020 18:54	U	5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: MAB  
 Analyst: CAC Date Prep: 11.24.2020 12:30 % Moisture:  
 Seq Number: 3143273 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.24.2020 14:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.24.2020 14:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.24.2020 14:46	U	1
Total TPH	PHC635	<50.10	50.10	mg/kg	11.24.2020 14:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.24.2020 14:46	
o-Terphenyl	84-15-1	121	%	70-135	11.24.2020 14:46	

# Certificate of Analytical Results 678851

## Larson and Associates, Inc., Midland, TX

Hayhurst Soil Pile- Skeen Back Fill

Sample Id:	<b>C-1</b>	Matrix:	Soil	Date Received:	11.23.2020 16:36
Lab Sample Id:	678851-001	Date Collected:			11.23.2020 09:30
Analytical Method: BTEX by EPA 8021B			Prep Method: SW5035A		
Tech:	MAB				
Analyst:	MAB	Date Prep:	11.24.2020 15:36	% Moisture:	
Seq Number:	3143258	Basis:		Wet Weight	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.24.2020 22:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.24.2020 22:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.24.2020 22:35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.24.2020 22:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.24.2020 22:35	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	11.24.2020 22:35	U	1
Total BTEX		<0.002000	0.002000	mg/kg	11.24.2020 22:35	U	1
<b>Surrogate</b>							
4-Bromofluorobenzene	460-00-4	122	%	70-130	11.24.2020 22:35		
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.24.2020 22:35		

# 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

**Larson and Associates, Inc.**  
Hayhurst Soil Pile- Skeen Back Fill

**Analytical Method: Chloride by EPA 300**

Seq Number: 3143277

MB Sample Id: 7715945-1-BLK

Matrix: Solid

LCS Sample Id: 7715945-1-BKS

Prep Method: E300P

Date Prep: 11.24.2020

LCSD Sample Id: 7715945-1-BSD

**Parameter**

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	240	96	238	95	90-110	1	20	mg/kg	11.24.2020 15:42	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3143277

Parent Sample Id: 678846-001

Matrix: Soil

MS Sample Id: 678846-001 S

Prep Method: E300P

Date Prep: 11.24.2020

MSD Sample Id: 678846-001 SD

**Parameter**

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2690	200	2870	90	2890	101	90-110	1	20	mg/kg	11.24.2020 16:45	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3143277

Parent Sample Id: 678848-005

Matrix: Soil

MS Sample Id: 678848-005 S

Prep Method: E300P

Date Prep: 11.24.2020

MSD Sample Id: 678848-005 SD

**Parameter**

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.8	201	219	97	220	97	90-110	0	20	mg/kg	11.24.2020 17:57	

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3143273

MB Sample Id: 7715953-1-BLK

Matrix: Solid

LCS Sample Id: 7715953-1-BKS

Prep Method: SW8015P

Date Prep: 11.24.2020

LCSD Sample Id: 7715953-1-BSD

**Parameter**

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	1030	103	1010	101	70-135	2	35	mg/kg	11.24.2020 14:06	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	1140	114	70-135	9	35	mg/kg	11.24.2020 14:06	

**Surrogate**

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		107		114		70-135	%	11.24.2020 14:06
o-Terphenyl	111		105		100		70-135	%	11.24.2020 14:06

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3143273

Matrix: Solid

MB Sample Id: 7715953-1-BLK

Prep Method: SW8015P

Date Prep: 11.24.2020

**Parameter**

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.24.2020 13:46	

MS/MSD Percent Recovery  
 Relative Percent Difference  
 LCS/LCSD Recovery  
 Log Difference

[D] = 100\*(C-A) / B  
 RPD = 200\* | (C-E) / (C+E) |  
 [D] = 100 \* (C) / [B]  
 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

**Larson and Associates, Inc.**  
Hayhurst Soil Pile- Skeen Back Fill

**Analytical Method:** TPH by SW8015 Mod

Seq Number: 3143273

Parent Sample Id: 678851-001

Matrix: Soil

MS Sample Id: 678851-001 S

Prep Method: SW8015P

Date Prep: 11.24.2020

MSD Sample Id: 678851-001 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	995	1150	116	1010	101	70-135	13	35	mg/kg	11.24.2020 15:06	
Diesel Range Organics (DRO)	<49.8	995	1090	110	1130	113	70-135	4	35	mg/kg	11.24.2020 15:06	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1-Chlorooctane			111			115			70-135	%	11.24.2020 15:06	
o-Terphenyl			107			104			70-135	%	11.24.2020 15:06	

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 3143258

MB Sample Id: 7715911-1-BLK

Matrix: Solid

LCS Sample Id: 7715911-1-BKS

Prep Method: SW5035A

Date Prep: 11.24.2020

LCSD Sample Id: 7715911-1-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	0.107	107	0.104	104	70-130	3	35	mg/kg	11.24.2020 10:40	
Toluene	<0.00200	0.100	0.0982	98	0.0974	97	70-130	1	35	mg/kg	11.24.2020 10:40	
Ethylbenzene	<0.00200	0.100	0.101	101	0.101	101	71-129	0	35	mg/kg	11.24.2020 10:40	
m,p-Xylenes	<0.00400	0.200	0.208	104	0.205	103	70-135	1	35	mg/kg	11.24.2020 10:40	
o-Xylene	<0.00200	0.100	0.102	102	0.101	101	71-133	1	35	mg/kg	11.24.2020 10:40	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag				Units	Analysis Date	
1,4-Difluorobenzene	106		102		100		70-130			%	11.24.2020 10:40	
4-Bromofluorobenzene	121		110		108		70-130			%	11.24.2020 10:40	

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 3143258

Parent Sample Id: 678846-001

Matrix: Soil

MS Sample Id: 678846-001 S

Prep Method: SW5035A

Date Prep: 11.24.2020

MSD Sample Id: 678846-001 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	0.100	0.107	107	0.0881	88	70-130	19	35	mg/kg	11.24.2020 13:34	
Toluene	<0.00200	0.100	0.0960	96	0.0781	78	70-130	21	35	mg/kg	11.24.2020 13:34	
Ethylbenzene	<0.00200	0.100	0.0934	93	0.0728	73	71-129	25	35	mg/kg	11.24.2020 13:34	
m,p-Xylenes	<0.00401	0.200	0.192	96	0.144	72	70-135	29	35	mg/kg	11.24.2020 13:34	
o-Xylene	<0.00200	0.100	0.0928	93	0.0711	71	71-133	26	35	mg/kg	11.24.2020 13:34	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1,4-Difluorobenzene			97		101		70-130			%	11.24.2020 13:34	
4-Bromofluorobenzene			105		112		70-130			%	11.24.2020 13:34	

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

[D] = 100\*(C-A) / B  
RPD = 200\* | (C-E) / (C+E) |  
[D] = 100 \* (C) / [B]  
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

678851

No 1426

## CHAIN-OF-CUSTODY

**Aarson & Associates, Inc.**  
Environmental Consultants

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

Data Reported to:

Yes  No

TIME ZONE:  
**MST**

	S=SOIL W=WATER A=AIR	P=PAINT SL=SLUDGE OT=OTHER		PRESERVATION
				# of Containers
				HCl HNO <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> ICE
				UNPRESERVED

**ANALYSES**

BTEX  MTBE  TPH 1005  TPH 1006  
TRPH 418.1  TPH 8015

GASOLINE MOD 8015   
DIESEL - MOD 8015

OIL - MOD 8015   
VOC 8260

SVOC 8270  PAH 8270  HOLDPAH   
8081 PESTICIDES  8151 HERBICIDES

TCLP VOC  Semi-VOC   
TCLP - METALS (RCRA)  OTHER LIST

TCLP - PEST  HERB  D.W. 200.8  TCLP  
TOTAL METALS (RCRA)  % MOISTURE  CYANIDE   
LEAD - TOTAL  FLASHPOINT   
RCI  TOX  TOTAL CHROMIUM   
TDS  TSS  HEXAVALENT CHROMIUM   
PH  EXPLOSIVES  PECHLORATE   
CHLORIDE  ANIONS  ALKALINITY

FIELD NOTES

DATE: **11/23/20**  
PO#: \_\_\_\_\_  
PROJECT LOCATION OR NAME: **Hayhurst Soil Pipe ~ Street Pier**  
LA PROJECT #: **20-0107-03** COLLECTOR: **TT**

PAGE **1** OF **1**

RELINQUISHED BY:(Signature) <b>John Johnson</b>	DATE/TIME <b>11/23/20 1636</b>	RECEIVED BY:(Signature) <b>Joe J. Nichols</b>	11-25-20 1636	TURN AROUND TIME <b>NORMAL</b>	LABORATORY USE ONLY RECEIVING TEMP: <b>16.4</b> THERM#: <b>TENM-007</b>
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)			1 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> OTHER <input type="checkbox"/>
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)			<input type="checkbox"/> CARRIER BILL # _____ <input type="checkbox"/> HAND DELIVERED
LABORATORY: <b>Xerlco</b>					
TOTAL	<b>1</b>				

**Eurofins Xenco, LLC**  
**Prelogin/Nonconformance Report- Sample Log-In**

**Client:** Larson and Associates, Inc.

**Date/ Time Received:** 11.23.2020 04.36.00 PM

**Work Order #:** 678851

Acceptable Temperature Range: 0 - 6 degC  
Air and Metal samples Acceptable Range: Ambient  
Temperature Measuring device used : T\_NM\_007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6* Custody Seals Signed and dated?	Yes
#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)?	No
#18 Water VOC samples have zero headspace?	N/A

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

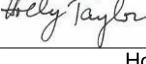
Analyst: PH Device/Lot#:

Checklist completed by:

  
\_\_\_\_\_  
Cloe Clifton

Date: 11.23.2020 \_\_\_\_\_

Checklist reviewed by:

  
\_\_\_\_\_  
Holly Taylor

Date: 11.23.2020 \_\_\_\_\_

# Certificate of Analysis Summary 678962

**Project Name:** Skeen 2H

**Project Id:** 20-0107-03  
**Contact:** Mark Larson

**Project Location:**

<b>Analysis Requested</b>		<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	678962-001 SW-N	678962-002 SW-E	678962-003 SW-S	678962-004 SW-W	678962-005 C-1	678962-006 C-2
		<i>Units/RL:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
<b>BTEX by EPA 8021B</b>		<i>Extracted:</i> <i>Analyzed:</i>	11.24.2020 10:42 12.02.2020 08:00 12.02.2020 13:35	11.24.2020 10:44 12.02.2020 08:00 12.02.2020 14:16	11.24.2020 10:46 12.02.2020 08:00 12.02.2020 14:36	11.24.2020 10:48 12.02.2020 08:00 12.02.2020 14:57	11.24.2020 10:48 12.02.2020 08:00 12.02.2020 15:18	11.24.2020 10:50 12.02.2020 08:00 12.02.2020 15:18
Benzene		<i>mg/kg</i>	RL	mg/kg	RL	mg/kg	RL	mg/kg
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400	<0.00400
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200
Total Xylenes		<0.002000	0.002000	<0.002000	0.002000	<0.002000	0.002000	<0.002000
Total BTEX		<0.002000	0.002000	<0.002000	0.002000	<0.002000	0.002000	<0.002000
<b>Chloride by EPA 300</b>		<i>Extracted:</i> <i>Analyzed:</i>	11.25.2020 09:45 11.25.2020 12:10	11.30.2020 15:35 12.01.2020 09:25	11.25.2020 13:02	11.25.2020 09:45 11.25.2020 13:09	11.25.2020 09:45 11.25.2020 13:09	11.25.2020 09:45 11.25.2020 13:16
Chloride		<i>Units/RL:</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
		116 X	50.0	289	49.6	22.1	4.95	253
<b>TPH by SW8015 Mod</b>		<i>Extracted:</i> <i>Analyzed:</i>	12.01.2020 17:00 12.02.2020 01:57	12.01.2020 17:00 12.02.2020 02:55	12.01.2020 17:00 12.02.2020 03:14	12.01.2020 17:00 12.02.2020 03:33	12.01.2020 17:00 12.02.2020 03:52	12.01.2020 17:00 12.02.2020 04:12
Gasoline Range Hydrocarbons (GRO)		<i>mg/kg</i>	RL	mg/kg	RL	mg/kg	RL	mg/kg
Diesel Range Organics (DRO)		<50.0	50.0	<49.8	49.8	<50.0	50.0	<49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	61.9	49.8	<50.0	50.0	<49.9
Total TPH		<50.00	50.00	<49.8	49.8	<50.0	50.0	<49.9
				61.90	49.80	<50.00	50.00	<49.90
						<50.00	50.00	<49.90

BRL - Below Reporting Limit

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

Holly Taylor

Date Received in Lab: Tue 11.24.2020 15:31

Report Date: 12.18.2020 14:55

Project Manager: Holly Taylor

# Certificate of Analysis Summary 678962

Larson and Associates, Inc., Midland, TX

**Project Id:** 20-0107-03  
**Contact:** Mark Larson

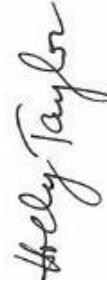
**Project Name:** Skeen 2H

**Date Received in Lab:** Tue 11.24.2020 15:31  
**Report Date:** 12.18.2020 14:55  
**Project Manager:** Holly Taylor

<i>Analysis Requested</i>		<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	678962-007 C-3	678962-008 C-4	678962-009 C-5	678962-010 C-6	
		SOIL	SOIL	SOIL	SOIL	SOIL	
<b>BTEX by EPA 8021B</b>		<i>Extracted:</i> 12.02.2020 08:00	11.24.2020 10:54	12.02.2020 08:00	12.01.2020 08:00	11.24.2020 10:56	12.01.2020 08:00
		<i>Analyzed:</i> <i>Units/RL:</i> mg/kg	12.02.2020 15:48	12.02.2020 16:08	12.01.2020 13:40		12.01.2020 14:01
Benzene		<0.00200	0.00200	<0.00200	<0.00200	<0.00200	<0.00199
Toluene		<0.00200	0.00200	<0.00200	<0.00200	<0.00200	<0.00199
Ethylbenzene		<0.00200	0.00200	<0.00200	<0.00200	<0.00200	<0.00199
m,p-Xylenes		<0.00400	0.00400	<0.00400	<0.00400	<0.00399	<0.00398
o-Xylene		<0.00200	0.00200	<0.00200	<0.00200	<0.00200	<0.00199
Total Xylenes		<0.002000	0.002000	<0.002000	<0.002000	<0.002000	<0.001990
Total BTEX		<0.002000	0.002000	<0.002000	<0.002000	<0.002000	<0.001990
<b>Chloride by EPA 300</b>		<i>Extracted:</i> 11.25.2020 09:45	11.25.2020 09:45	11.25.2020 11:15	11.25.2020 11:15		
		<i>Analyzed:</i> <i>Units/RL:</i> mg/kg	11.25.2020 13:24	11.25.2020 13:31	11.25.2020 16:33	11.25.2020 16:39	
Chloride		359	50.0	128	49.5	1300	50.3
<b>TPH by SW8015 Mod</b>		<i>Extracted:</i> 12.01.2020 17:00	12.01.2020 17:00	12.01.2020 17:00	12.01.2020 17:00	12.01.2020 17:00	12.01.2020 17:00
		<i>Analyzed:</i> <i>Units/RL:</i> mg/kg	12.02.2020 04:31	12.02.2020 04:50	12.02.2020 05:09	12.02.2020 05:28	
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	216	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0
Total TPH		<50.00	50.00	<49.90	49.90	216.0	49.90

BRL - Below Reporting Limit

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



# Analytical Report 678962

for

**Larson and Associates, Inc.**

**Project Manager: Mark Larson**

**Skeen 2H**

**20-0107-03**

**12.18.2020**

Collected By: Client



**1211 W. Florida Ave  
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)  
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)  
Xenco-Tampa: Florida (E87429), North Carolina (483)

12.18.2020

Project Manager: **Mark Larson**

**Larson and Associates, Inc.**

P. O. Box 50685

Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **678962**

**Skeen 2H**

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 Eurofins Xenco, LLC Report Number(s) 678962. 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 Eurofins Xenco, LLC. 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. 678962 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,



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**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 678962

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW-N	S	11.24.2020 10:40		678962-001
SW-E	S	11.24.2020 10:42		678962-002
SW-S	S	11.24.2020 10:44		678962-003
SW-W	S	11.24.2020 10:46		678962-004
C-1	S	11.24.2020 10:48		678962-005
C-2	S	11.24.2020 10:50		678962-006
C-3	S	11.24.2020 10:52		678962-007
C-4	S	11.24.2020 10:54		678962-008
C-5	S	11.24.2020 10:56		678962-009
C-6	S	11.24.2020 10:58		678962-010

# CASE NARRATIVE

**Client Name:** Larson and Associates, Inc.

**Project Name:** Skeen 2H

Project ID: 20-0107-03  
Work Order Number(s): 678962

Report Date: 12.18.2020  
Date Received: 11.24.2020

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**Sample receipt non conformances and comments:**

12/18/2020 1.001 Revised to change sample IDs for 005-010 per Robert Nelson (email). HT

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3143457 Chloride by EPA 300

Lab Sample ID 678962-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 678962-001, -002, -004, -005, -006, -007, -008.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3143719 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 678962-004, 678962-002.

Batch: LBA-3143802 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected;  
Samples affected are: 678962-001.

Lab Sample ID 678962-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 678962-001, -002, -003, -004, -005, -006, -007, -008.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: SW-N Matrix: Soil Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-001 Date Collected: 11.24.2020 10:40  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE  
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:  
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	116	50.0	mg/kg	11.25.2020 12:10	X	10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM  
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:  
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 01:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 01:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 01:57	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 01:57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	127	%	70-130	12.02.2020 01:57		
o-Terphenyl	84-15-1	126	%	70-130	12.02.2020 01:57		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id:	SW-N	Matrix:	Soil	Date Received:	11.24.2020 15:31
Lab Sample Id:	678962-001	Date Collected:			11.24.2020 10:40
Analytical Method: BTEX by EPA 8021B			Prep Method: SW5035A		
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	12.02.2020 08:00	Basis:	Wet Weight
Seq Number:	3143802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 13:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 13:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 13:35	UX	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 13:35	UX	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 13:35	UX	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 13:35	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 13:35	U	1
<b>Surrogate</b>		<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene		460-00-4	0	%	70-130	12.02.2020 13:35	**
1,4-Difluorobenzene		540-36-3	86	%	70-130	12.02.2020 13:35	

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-E** Matrix: **Soil** Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-002 Date Collected: 11.24.2020 10:42  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE  
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:  
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>289</b>	49.6	mg/kg	11.25.2020 12:32		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM  
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:  
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.02.2020 02:55	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>61.9</b>	49.8	mg/kg	12.02.2020 02:55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.02.2020 02:55	U	1
<b>Total TPH</b>	PHC635	<b>61.90</b>	49.80	mg/kg	12.02.2020 02:55		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	126	%	70-130	12.02.2020 02:55		
o-Terphenyl	84-15-1	144	%	70-130	12.02.2020 02:55	**	

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id:	<b>SW-E</b>	Matrix:	Soil	Date Received:	11.24.2020 15:31
Lab Sample Id:	678962-002	Date Collected:			11.24.2020 10:42
Analytical Method: BTEX by EPA 8021B			Prep Method: SW5035A		
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	12.02.2020 08:00	Basis:	Wet Weight
Seq Number:	3143802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 13:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 13:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 13:55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 13:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 13:55	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 13:55	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 13:55	U	1
<b>Surrogate</b>		<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene		540-36-3	88	%	70-130	12.02.2020 13:55	
4-Bromofluorobenzene		460-00-4	99	%	70-130	12.02.2020 13:55	

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: SW-S Matrix: Soil Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-003 Date Collected: 11.24.2020 10:44  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC  
 Analyst: CHE Date Prep: 11.30.2020 15:35 % Moisture:  
 Seq Number: 3143554 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.1	4.95	mg/kg	12.01.2020 09:25		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM  
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:  
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 03:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 03:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 03:14	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 03:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	12.02.2020 03:14	
o-Terphenyl	84-15-1	120	%	70-130	12.02.2020 03:14	

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: SW-S Matrix: Soil Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-003 Date Collected: 11.24.2020 10:44  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: MNR Analyst: MNR % Moisture:  
 Seq Number: 3143802 Date Prep: 12.02.2020 08:00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 14:16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 14:16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 14:16	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 14:16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 14:16	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 14:16	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 14:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	87	%	70-130	12.02.2020 14:16		
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.02.2020 14:16		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **SW-W** Matrix: Soil Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-004 Date Collected: 11.24.2020 10:46

Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE  
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:  
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>253</b>	50.2	mg/kg	11.25.2020 13:02		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM  
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:  
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 03:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 03:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 03:33	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 03:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-130	12.02.2020 03:33	
o-Terphenyl	84-15-1	141	%	70-130	12.02.2020 03:33	**

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id:	<b>SW-W</b>	Matrix:	Soil	Date Received:	11.24.2020 15:31
Lab Sample Id:	678962-004	Date Collected:			11.24.2020 10:46
Analytical Method: BTEX by EPA 8021B			Prep Method: SW5035A		
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	12.02.2020 08:00	Basis:	Wet Weight
Seq Number:	3143802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 14:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 14:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 14:36	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 14:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 14:36	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 14:36	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 14:36	U	1
<b>Surrogate</b>		<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene		540-36-3	81	%	70-130	12.02.2020 14:36	
4-Bromofluorobenzene		460-00-4	97	%	70-130	12.02.2020 14:36	

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-1** Matrix: **Soil** Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-005 Date Collected: 11.24.2020 10:48  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE Analyst: CHE % Moisture:  
 Seq Number: 3143457 Date Prep: 11.25.2020 09:45 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>180</b>	49.7	mg/kg	11.25.2020 13:09		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM Analyst: ARM % Moisture:  
 Seq Number: 3143719 Date Prep: 12.01.2020 17:00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 03:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 03:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 03:52	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 03:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-130	12.02.2020 03:52		
o-Terphenyl	84-15-1	120	%	70-130	12.02.2020 03:52		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id:	<b>C-1</b>	Matrix:	Soil	Date Received:	11.24.2020 15:31
Lab Sample Id:	678962-005	Date Collected:			11.24.2020 10:48
Analytical Method: BTEX by EPA 8021B			Prep Method: SW5035A		
Tech:	MNR				
Analyst:	MNR	Date Prep:	12.02.2020 08:00	% Moisture:	
Seq Number:	3143802			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 14:57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 14:57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 14:57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 14:57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 14:57	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 14:57	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 14:57	U	1
<b>Surrogate</b>							
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.02.2020 14:57		
1,4-Difluorobenzene	540-36-3	87	%	70-130	12.02.2020 14:57		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-2** Matrix: **Soil** Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-006 Date Collected: 11.24.2020 10:50  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE Analyst: CHE % Moisture:  
 Seq Number: 3143457 Date Prep: 11.25.2020 09:45 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>184</b>	49.6	mg/kg	11.25.2020 13:16		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM Analyst: ARM % Moisture:  
 Seq Number: 3143719 Date Prep: 12.01.2020 17:00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.02.2020 04:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.02.2020 04:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.02.2020 04:12	U	1
Total TPH	PHC635	<49.90	49.90	mg/kg	12.02.2020 04:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	12.02.2020 04:12	
o-Terphenyl	84-15-1	120	%	70-130	12.02.2020 04:12	

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-2** Matrix: **Soil** Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-006 Date Collected: 11.24.2020 10:50  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: MNR Analyst: MNR % Moisture:  
 Seq Number: 3143802 Date Prep: 12.02.2020 08:00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 15:18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 15:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 15:18	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 15:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 15:18	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 15:18	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 15:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.02.2020 15:18		
1,4-Difluorobenzene	540-36-3	85	%	70-130	12.02.2020 15:18		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-3** Matrix: **Soil** Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-007 Date Collected: 11.24.2020 10:52

Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE  
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:  
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>359</b>	50.0	mg/kg	11.25.2020 13:24		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM  
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:  
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 04:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 04:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 04:31	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 04:31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	118	%	70-130	12.02.2020 04:31		
o-Terphenyl	84-15-1	123	%	70-130	12.02.2020 04:31		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id:	<b>C-3</b>	Matrix:	Soil	Date Received:	11.24.2020 15:31
Lab Sample Id:	678962-007	Date Collected:			11.24.2020 10:52
Analytical Method: BTEX by EPA 8021B			Prep Method: SW5035A		
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	12.02.2020 08:00	Basis:	Wet Weight
Seq Number:	3143802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 15:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 15:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 15:48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 15:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 15:48	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 15:48	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 15:48	U	1
<b>Surrogate</b>							
1,4-Difluorobenzene	540-36-3	83	%	70-130	12.02.2020 15:48		
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.02.2020 15:48		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: C-4 Matrix: Soil Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-008 Date Collected: 11.24.2020 10:54  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE  
 Analyst: CHE Date Prep: 11.25.2020 09:45 % Moisture:  
 Seq Number: 3143457 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	128	49.5	mg/kg	11.25.2020 13:31		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM  
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:  
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.02.2020 04:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.02.2020 04:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.02.2020 04:50	U	1
Total TPH	PHC635	<49.90	49.90	mg/kg	12.02.2020 04:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	12.02.2020 04:50	
o-Terphenyl	84-15-1	122	%	70-130	12.02.2020 04:50	

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id:	<b>C-4</b>	Matrix:	Soil	Date Received:	11.24.2020 15:31
Lab Sample Id:	678962-008	Date Collected:			11.24.2020 10:54
Analytical Method: BTEX by EPA 8021B			Prep Method: SW5035A		
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	12.02.2020 08:00	Basis:	Wet Weight
Seq Number:	3143802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.02.2020 16:08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.02.2020 16:08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.02.2020 16:08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.02.2020 16:08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.02.2020 16:08	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.02.2020 16:08	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.02.2020 16:08	U	1
<b>Surrogate</b>							
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.02.2020 16:08		
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.02.2020 16:08		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-5** Matrix: Soil Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-009 Date Collected: 11.24.2020 10:56

Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC  
 Analyst: CHE Date Prep: 11.25.2020 11:15 % Moisture:  
 Seq Number: 3143454 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>1300</b>	50.3	mg/kg	11.25.2020 16:33		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM  
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:  
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.02.2020 05:09	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>216</b>	49.9	mg/kg	12.02.2020 05:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.02.2020 05:09	U	1
<b>Total TPH</b>	PHC635	<b>216.0</b>	49.90	mg/kg	12.02.2020 05:09		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	124	%	70-130	12.02.2020 05:09		
o-Terphenyl	84-15-1	129	%	70-130	12.02.2020 05:09		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id:	<b>C-5</b>	Matrix:	Soil	Date Received:	11.24.2020 15:31
Lab Sample Id:	678962-009	Date Collected:			11.24.2020 10:56
Analytical Method: BTEX by EPA 8021B			Prep Method: SW5035A		
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	12.01.2020 08:00	Basis:	Wet Weight
Seq Number:	3143691				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.2020 13:40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.2020 13:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.2020 13:40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.01.2020 13:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.2020 13:40	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/kg	12.01.2020 13:40	U	1
Total BTEX		<0.002000	0.002000	mg/kg	12.01.2020 13:40	U	1
<b>Surrogate</b>							
1,4-Difluorobenzene	540-36-3	85	%	70-130	12.01.2020 13:40		
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.01.2020 13:40		

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-6** Matrix: **Soil** Date Received: 11.24.2020 15:31  
 Lab Sample Id: 678962-010 Date Collected: 11.24.2020 10:58  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC  
 Analyst: CHE Date Prep: 11.25.2020 11:15 % Moisture:  
 Seq Number: 3143454 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>216</b>	50.1	mg/kg	11.25.2020 16:39		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM  
 Analyst: ARM Date Prep: 12.01.2020 17:00 % Moisture:  
 Seq Number: 3143719 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.02.2020 05:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.02.2020 05:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.02.2020 05:28	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	12.02.2020 05:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	12.02.2020 05:28	
o-Terphenyl	84-15-1	118	%	70-130	12.02.2020 05:28	

# Certificate of Analytical Results 678962

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id:	<b>C-6</b>	Matrix:	Soil	Date Received:	11.24.2020 15:31
Lab Sample Id:	678962-010	Date Collected:			11.24.2020 10:58
Analytical Method: BTEX by EPA 8021B			Prep Method: SW5035A		
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	12.01.2020 08:00	Basis:	Wet Weight
Seq Number:	3143691				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.01.2020 14:01	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.01.2020 14:01	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.01.2020 14:01	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.01.2020 14:01	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.01.2020 14:01	U	1
Total Xylenes	1330-20-7	<0.001990	0.001990	mg/kg	12.01.2020 14:01	U	1
Total BTEX		<0.001990	0.001990	mg/kg	12.01.2020 14:01	U	1
<b>Surrogate</b>		<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene		540-36-3	89	%	70-130	12.01.2020 14:01	
4-Bromofluorobenzene		460-00-4	105	%	70-130	12.01.2020 14:01	

# 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

## Larson and Associates, Inc.

Skeen 2H

**Analytical Method: Chloride by EPA 300**

Seq Number:	3143457	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7715949-1-BLK	LCS Sample Id: 7715949-1-BKS				Date Prep: 11.25.2020			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	<5.00	250	265	106	265	106	90-110	0	20
								mg/kg	11.25.2020 10:13

**Analytical Method: Chloride by EPA 300**

Seq Number:	3143454	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7715962-1-BLK	LCS Sample Id: 7715962-1-BKS				Date Prep: 11.25.2020			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	<5.00	250	259	104	261	104	90-110	1	20
								mg/kg	11.25.2020 14:05

**Analytical Method: Chloride by EPA 300**

Seq Number:	3143554	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7716101-1-BLK	LCS Sample Id: 7716101-1-BKS				Date Prep: 11.30.2020			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	<5.00	250	270	108	270	108	90-110	0	20
								mg/kg	12.01.2020 08:35

**Analytical Method: Chloride by EPA 300**

Seq Number:	3143457	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	678865-001	MS Sample Id: 678865-001 S				Date Prep: 11.25.2020			
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	3100	2510	6010	116	5880	111	90-110	2	20
								mg/kg	11.25.2020 10:35
									X

**Analytical Method: Chloride by EPA 300**

Seq Number:	3143457	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	678962-001	MS Sample Id: 678962-001 S				Date Prep: 11.25.2020			
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	116	2500	3050	117	2960	114	90-110	3	20
								mg/kg	11.25.2020 12:18
									X

**Analytical Method: Chloride by EPA 300**

Seq Number:	3143454	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	679025-001	MS Sample Id: 679025-001 S				Date Prep: 11.25.2020			
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	989	248	1200	85	1200	85	90-110	0	20
								mg/kg	11.25.2020 14:21
									X

MS/MSD Percent Recovery  
 Relative Percent Difference  
 LCS/LCSD Recovery  
 Log Difference

[D] = 100\*(C-A) / B  
 RPD = 200\* | (C-E) / (C+E) |  
 [D] = 100 \* (C) / [B]  
 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

**Larson and Associates, Inc.**  
Skeen 2H

**Analytical Method: Chloride by EPA 300**

Seq Number:	3143454	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	679026-005	MS Sample Id: 679026-005 S				Date Prep: 11.25.2020			
<b>Parameter</b>	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit
Chloride	63.2	250	311	99	311	99	90-110	0	20
								mg/kg	11.25.2020 15:35

**Analytical Method: Chloride by EPA 300**

Seq Number:	3143554	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	679045-001	MS Sample Id: 679045-001 S				Date Prep: 11.30.2020			
<b>Parameter</b>	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit
Chloride	9.47	248	275	107	275	107	90-110	0	20
								mg/kg	12.01.2020 08:54

**Analytical Method: TPH by SW8015 Mod**

Seq Number:	3143719	Matrix: Solid				Prep Method: SW8015P			
MB Sample Id:	7716215-1-BLK	LCS Sample Id: 7716215-1-BKS				Date Prep: 12.01.2020			
<b>Parameter</b>	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1100	110	1100	110	70-130	0	20
Diesel Range Organics (DRO)	<50.0	1000	1130	113	1200	120	70-130	6	20
<b>Surrogate</b>	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		130		101		70-130	%	12.02.2020 01:19
o-Terphenyl	122		129		122		70-130	%	12.02.2020 01:19

**Analytical Method: TPH by SW8015 Mod**

Seq Number:	3143719	Matrix: Solid				Prep Method: SW8015P			
MB Sample Id:	7716215-1-BLK	MB Sample Id: 7716215-1-BLK				Date Prep: 12.01.2020			
<b>Parameter</b>	MB Result						Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0						mg/kg	12.02.2020 00:59	

**Analytical Method: TPH by SW8015 Mod**

Seq Number:	3143719	Matrix: Soil				Prep Method: SW8015P			
Parent Sample Id:	678962-001	MS Sample Id: 678962-001 S				Date Prep: 12.01.2020			
<b>Parameter</b>	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit
Gasoline Range Hydrocarbons (GRO)	<49.9	998	1030	103	1080	108	70-130	5	20
Diesel Range Organics (DRO)	<49.9	998	1060	106	1170	117	70-130	10	20
<b>Surrogate</b>	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date		
1-Chlorooctane		123		127	70-130	%	12.02.2020 02:17		
o-Terphenyl		113		118	70-130	%	12.02.2020 02:17		

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

[D] = 100\*(C-A) / B  
RPD = 200\* | (C-E) / (C+E) |  
[D] = 100 \* (C) / [B]  
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

## Larson and Associates, Inc.

Skeen 2H

## Analytical Method: BTEX by EPA 8021B

Seq Number:	3143691	Matrix: Solid						Prep Method: SW5035A				
MB Sample Id:	7716252-1-BLK	LCS Sample Id: 7716252-1-BKS						Date Prep: 12.01.2020				
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	0.0857	86	0.110	110	70-130	25	35	mg/kg	12.01.2020 10:57	
Toluene	<0.00200	0.100	0.0893	89	0.102	102	70-130	13	35	mg/kg	12.01.2020 10:57	
Ethylbenzene	<0.00200	0.100	0.0870	87	0.0988	99	70-130	13	35	mg/kg	12.01.2020 10:57	
m,p-Xylenes	<0.00400	0.200	0.169	85	0.190	95	70-130	12	35	mg/kg	12.01.2020 10:57	
o-Xylene	<0.00200	0.100	0.0866	87	0.0959	96	70-130	10	35	mg/kg	12.01.2020 10:57	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	82		88		94		70-130			%	12.01.2020 10:57	
4-Bromofluorobenzene	92		93		91		70-130			%	12.01.2020 10:57	

## Analytical Method: BTEX by EPA 8021B

Seq Number:	3143802	Matrix: Solid						Prep Method: SW5035A				
MB Sample Id:	7716344-1-BLK	LCS Sample Id: 7716344-1-BKS						Date Prep: 12.02.2020				
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	0.103	103	0.109	109	70-130	6	35	mg/kg	12.02.2020 11:11	
Toluene	<0.00200	0.100	0.0993	99	0.104	104	70-130	5	35	mg/kg	12.02.2020 11:11	
Ethylbenzene	<0.00200	0.100	0.102	102	0.107	107	70-130	5	35	mg/kg	12.02.2020 11:11	
m,p-Xylenes	<0.00400	0.200	0.192	96	0.203	102	70-130	6	35	mg/kg	12.02.2020 11:11	
o-Xylene	<0.00200	0.100	0.0949	95	0.101	101	70-130	6	35	mg/kg	12.02.2020 11:11	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	82		92		93		70-130			%	12.02.2020 11:11	
4-Bromofluorobenzene	94		91		94		70-130			%	12.02.2020 11:11	

## Analytical Method: BTEX by EPA 8021B

Seq Number:	3143691	Matrix: Soil						Prep Method: SW5035A				
Parent Sample Id:	678984-001	MS Sample Id: 678984-001 S						Date Prep: 12.01.2020				
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	0.0387	39	0.0759	76	70-130	65	35	mg/kg	12.01.2020 11:39	XF
Toluene	<0.00200	0.0998	0.0458	46	0.0683	68	70-130	39	35	mg/kg	12.01.2020 11:39	XF
Ethylbenzene	<0.00200	0.0998	0.0257	26	0.0383	38	70-130	39	35	mg/kg	12.01.2020 11:39	XF
m,p-Xylenes	<0.00399	0.200	0.0748	37	0.0985	49	70-130	27	35	mg/kg	12.01.2020 11:39	X
o-Xylene	<0.00200	0.0998	0.0505	51	0.0633	63	70-130	22	35	mg/kg	12.01.2020 11:39	X
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene			76		91		70-130			%	12.01.2020 11:39	
4-Bromofluorobenzene			105		98		70-130			%	12.01.2020 11:39	

MS/MSD Percent Recovery  
 Relative Percent Difference  
 LCS/LCSD Recovery  
 Log Difference

[D] = 100\*(C-A) / B  
 RPD = 200\* | (C-E) / (C+E) |  
 [D] = 100 \* (C) / [B]  
 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

**Larson and Associates, Inc.**  
Skeen 2H

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 3143802

Parent Sample Id: 678962-001

Matrix: Soil

MS Sample Id: 678962-001 S

Prep Method: SW5035A

Date Prep: 12.02.2020

MSD Sample Id: 678962-001 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	0.100	0.106	106	0.0851	85	70-130	22	35	mg/kg	12.02.2020 11:53	
Toluene	<0.00200	0.100	0.0837	84	0.0776	78	70-130	8	35	mg/kg	12.02.2020 11:53	
Ethylbenzene	<0.00200	0.100	0.0675	68	0.0616	62	70-130	9	35	mg/kg	12.02.2020 11:53	X
m,p-Xylenes	<0.00400	0.200	0.128	64	0.119	60	70-130	7	35	mg/kg	12.02.2020 11:53	X
o-Xylene	<0.00200	0.100	0.0652	65	0.0597	60	70-130	9	35	mg/kg	12.02.2020 11:53	X
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1,4-Difluorobenzene			92		85		70-130			%	12.02.2020 11:53	
4-Bromofluorobenzene			96		101		70-130			%	12.02.2020 11:53	

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

[D] = 100\*(C-A) / B  
RPD = 200\* | (C-E) / (C+E) |  
[D] = 100 \* (C) / [B]  
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

**Aarson & Associates, Inc.**  
Environmental Consultants

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

No 1427  
678902 CHAIN-OF-CUSTODY

Data Reported to:

Yes  No

TIME ZONE:  
Time zone/State:

**MST**

S=SOIL  
W=WATER  
A=AIR  
OT=OTHER

P=PAINT  
SL=SLUDGE  
UNPRESERVED

PRESERVATION  
HCl  
HNO<sub>3</sub>  
H<sub>2</sub>SO<sub>4</sub>  
NaOH  
ICE

ANALYSES  
BTEX  MTBE  TPH 1005  TPH 1006  
TRPH 418.1  TPH 1005  HOLDPAH   
GASOLINE - MOD 8015  HERBICIDES  8151 HERBICIDES   
DIESEL - MOD 8015  VOC 8260  Semi-VOC   
OIL - MOD 8015  OTHER LIST  TCLP VOC   
VOC 8260  PAH 8270  TCLP VOC   
SVOC 8270  Semi-VOC  OTHER LIST   
8081 PESTICIDES  8151 HERBICIDES  CYANIDE   
8082 PCBs  OTHER LIST  % MOISTURE  CHROMIUM   
TBLP - METALS (RCRA)  HERB  D.W. 200.8  FLASHPOINT   
TCLP - PEST  TOX  TOTAL METALS (RCRA)  PECHLORATE   
TOTAL METALS (RCRA)  TOX  % MOISTURE  ALKALINITY   
LEAD - TOTAL  D.W. 200.8  FLASHPOINT   
RCI  TOX  TOTAL METALS (RCRA)  PECHLORATE   
TDS  TSS  % MOISTURE  ANIONS  EXPLOSIVES   
pH  HEXAVALENT CHROMIUM  CHLORIDES   
FIELD NOTES

DATE: **1/24/20**  
PO#: \_\_\_\_\_  
PROJECT LOCATION OR NAME: **Skreen 24**  
LAI PROJECT #: **20-0107-03** COLLECTOR: **TJ**

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION
SW - N	1/24/20	1040	5	I	X	X
SW - E	1042				X	X
SW - S	1044				X	X
SW - W	1046				X	X
S-1	1049				X	X
S-2	1050				X	X
S-3	1052				X	X
S-4	1054				X	X
S-5	1056				X	X
S-6	1058				X	X
TOTAL	10					
RELINQUISHED BY:(Signature)	DATETIME	RECEIVED BY: (Signature)	TURN AROUND TIME	LABORATORY USE ONLY:	RECEIVING TEMP:	Final 1.001
<i>John D.</i>	1/24/20 15:31	<i>John D.</i>	NORMAL <input checked="" type="checkbox"/>	3.4 / 2.9	3.4 °C	Page 32 of 33
RELINQUISHED BY:(Signature)	DATETIME	RECEIVED BY: (Signature)	1 DAY <input type="checkbox"/>	CUSTODY SEALS - <input type="checkbox"/>	THE RM#:	1/24/20
RELINQUISHED BY:(Signature)	DATETIME	RECEIVED BY: (Signature)	2 DAY <input type="checkbox"/>	BROKEN <input type="checkbox"/>	NOT USED <input type="checkbox"/>	
LABORATORY: <i>XenC</i>			OTHER <input type="checkbox"/>	CARRIER BILL# <input type="checkbox"/>	HAND DELIVERED <input type="checkbox"/>	

**Eurofins Xenco, LLC**  
**Prelogin/Nonconformance Report- Sample Log-In**

**Client:** Larson and Associates, Inc.

**Date/ Time Received:** 11.24.2020 03.31.00 PM

**Work Order #:** 678962

Acceptable Temperature Range: 0 - 6 degC  
Air and Metal samples Acceptable Range: Ambient  
Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.9
#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:

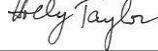
PH Device/Lot#:

**Checklist completed by:**

  
Brianna Teel

Date: 11.24.2020

**Checklist reviewed by:**

  
Holly Taylor

Date: 11.29.2020

# Certificate of Analysis Summary 681077

Project Name: Skeen 2H

Project Id: 20-0107-03  
Contact: Mark Larson

Date Received in Lab: Tue 12.15.2020 10:42  
Report Date: 12.22.2020 08:56  
Project Manager: Holly Taylor

Analysis Requested	Lab Id: Field Id: Depth: Matrix: Sampled:	681077-001 C-5 SOIL 12.14.2020 13:30		
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i> 12.16.2020 14:00 <i>Analyzed:</i> 12.16.2020 19:22 <i>Units/RL:</i> mg/kg RL	<0.00200 0.00200		
Benzene		<0.00200 0.00200		
Toluene		<0.00200 0.00200		
Ethylbenzene		<0.00200 0.00200		
m,p-Xylenes		<0.00400 0.00400		
o-Xylene		<0.00200 0.00200		
Total Xylenes		<0.00200 0.00200		
Total BTEX		<0.00200 0.00200		
<b>Chloride by EPA 300</b>	<i>Extracted:</i> 12.16.2020 10:20 <i>Analyzed:</i> 12.16.2020 11:39 <i>Units/RL:</i> mg/kg RL			
Chloride		304 50.4		
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i> 12.17.2020 14:00 <i>Analyzed:</i> 12.18.2020 00:08 <i>Units/RL:</i> mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0		
Diesel Range Organics (DRO)		<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0		
Total TPH		<50.0 50.0		

BRL - Below Reporting Limit

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

Holly Taylor

# Analytical Report 681077

for

**Larson and Associates, Inc.**

**Project Manager: Mark Larson**

**Skeen 2H**

**20-0107-03**

**12.22.2020**

Collected By: Client



**1211 W. Florida Ave  
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)  
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)  
Xenco-Tampa: Florida (E87429), North Carolina (483)

12.22.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **681077**

**Skeen 2H**  
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 Eurofins Xenco, LLC Report Number(s) 681077. 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 Eurofins Xenco, LLC. 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. 681077 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 Eurofins Xenco, LLC 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**  
Project Manager

*A Small Business and Minority Company*

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

# Sample Cross Reference 681077

Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C-5	S	12.14.2020 13:30		681077-001

# CASE NARRATIVE

***Client Name: Larson and Associates, Inc.***

***Project Name: Skeen 2H***

Project ID: 20-0107-03  
Work Order Number(s): 681077

Report Date: 12.22.2020  
Date Received: 12.15.2020

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**Sample receipt non conformances and comments:**

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**Sample receipt non conformances and comments per sample:**

None

# Certificate of Analytical Results 681077

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-5** Matrix: **Soil** Date Received: 12.15.2020 10:42  
 Lab Sample Id: 681077-001 Date Collected: 12.14.2020 13:30  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE Analyst: CHE % Moisture:  
 Seq Number: 3145163 Date Prep: 12.16.2020 10:20 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>304</b>	50.4	mg/kg	12.16.2020 11:39		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM Analyst: ARM % Moisture:  
 Seq Number: 3145320 Date Prep: 12.17.2020 14:00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.18.2020 00:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.18.2020 00:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.18.2020 00:08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.18.2020 00:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-130	12.18.2020 00:08	
o-Terphenyl	84-15-1	111	%	70-130	12.18.2020 00:08	

# Certificate of Analytical Results 681077

## Larson and Associates, Inc., Midland, TX

Skeen 2H

Sample Id: **C-5** Matrix: **Soil** Date Received: 12.15.2020 10:42  
 Lab Sample Id: 681077-001 Date Collected: 12.14.2020 13:30  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL Analyst: KTL % Moisture:  
 Seq Number: 3145180 Date Prep: 12.16.2020 14:00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.16.2020 19:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.16.2020 19:22	U	1
<b>Surrogate</b>		<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene		540-36-3	85	%	70-130	12.16.2020 19:22	
4-Bromofluorobenzene		460-00-4	101	%	70-130	12.16.2020 19:22	

# 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

## Larson and Associates, Inc.

Skeen 2H

**Analytical Method: Chloride by EPA 300**

Seq Number:	3145163	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7717240-1-BLK	LCS Sample Id: 7717240-1-BKS				Date Prep: 12.16.2020			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	<5.00	250	255	102	254	102	90-110	0	20
								mg/kg	12.16.2020 10:42

**Analytical Method: Chloride by EPA 300**

Seq Number:	3145163	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	680993-005	MS Sample Id: 680993-005 S				Date Prep: 12.16.2020			
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	13.1	248	272	104	273	105	90-110	0	20
								mg/kg	12.16.2020 12:11

**Analytical Method: Chloride by EPA 300**

Seq Number:	3145163	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	681035-003	MS Sample Id: 681035-003 S				Date Prep: 12.16.2020			
<b>Parameter</b>	<b>Parent Result</b>	<b>Spike Amount</b>	<b>MS Result</b>	<b>MS %Rec</b>	<b>MSD Result</b>	<b>MSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Chloride	325	251	572	98	575	100	90-110	1	20
								mg/kg	12.16.2020 10:58

**Analytical Method: TPH by SW8015 Mod**

Seq Number:	3145320	Matrix: Solid				Prep Method: SW8015P			
MB Sample Id:	7717394-1-BLK	LCS Sample Id: 7717394-1-BKS				Date Prep: 12.17.2020			
<b>Parameter</b>	<b>MB Result</b>	<b>Spike Amount</b>	<b>LCS Result</b>	<b>LCS %Rec</b>	<b>LCSD Result</b>	<b>LCSD %Rec</b>	<b>Limits</b>	<b>%RPD</b>	<b>RPD Limit</b>
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	956	96	971	97	70-130	2	20
Diesel Range Organics (DRO)	<50.0	1000	1050	105	1040	104	70-130	1	20
<b>Surrogate</b>	<b>MB %Rec</b>	<b>MB Flag</b>	<b>LCS %Rec</b>	<b>LCS Flag</b>	<b>LCSD %Rec</b>	<b>LCSD Flag</b>	<b>Limits</b>	<b>Units</b>	<b>Analysis Date</b>
1-Chlorooctane	111		129		128		70-130	%	12.17.2020 17:04
o-Terphenyl	121		98		97		70-130	%	12.17.2020 17:04

**Analytical Method: TPH by SW8015 Mod**

Seq Number:	3145320	Matrix: Solid				Prep Method: SW8015P			
MB Sample Id:	7717394-1-BLK	MB Sample Id: 7717394-1-BLK				Date Prep: 12.17.2020			
<b>Parameter</b>	<b>MB Result</b>						<b>Units</b>	<b>Analysis Date</b>	<b>Flag</b>
Motor Oil Range Hydrocarbons (MRO)	<50.0						mg/kg	12.17.2020 16:46	

MS/MSD Percent Recovery  
 Relative Percent Difference  
 LCS/LCSD Recovery  
 Log Difference

[D] = 100\*(C-A) / B  
 RPD = 200\* | (C-E) / (C+E) |  
 [D] = 100 \* (C) / [B]  
 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

**Larson and Associates, Inc.**

Skeen 2H

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3145320

Parent Sample Id: 680993-001

Matrix: Soil

MS Sample Id: 680993-001 S

Prep Method: SW8015P

Date Prep: 12.17.2020

MSD Sample Id: 680993-001 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)	<50.0	999	1160	116	1190	119	70-130	3	20	mg/kg	12.17.2020 18:00	
Diesel Range Organics (DRO)	<50.0	999	1150	115	1190	119	70-130	3	20	mg/kg	12.17.2020 18:00	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1-Chlorooctane			129		119		70-130			%	12.17.2020 18:00	
o-Terphenyl			97		128		70-130			%	12.17.2020 18:00	

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 3145180

MB Sample Id: 7717309-1-BLK

Matrix: Solid

LCS Sample Id: 7717309-1-BKS

Prep Method: SW5035A

Date Prep: 12.16.2020

LCSD Sample Id: 7717309-1-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	0.0851	85	0.0832	83	70-130	2	35	mg/kg	12.16.2020 15:16	
Toluene	<0.00200	0.100	0.0942	94	0.0950	95	70-130	1	35	mg/kg	12.16.2020 15:16	
Ethylbenzene	<0.00200	0.100	0.0976	98	0.101	101	70-130	3	35	mg/kg	12.16.2020 15:16	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.177	89	70-130	1	35	mg/kg	12.16.2020 15:16	
o-Xylene	<0.00200	0.100	0.0867	87	0.0875	88	70-130	1	35	mg/kg	12.16.2020 15:16	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag				Units	Analysis Date	
1,4-Difluorobenzene	79		87		87		70-130			%	12.16.2020 15:16	
4-Bromofluorobenzene	99		93		96		70-130			%	12.16.2020 15:16	

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 3145180

Parent Sample Id: 681035-003

Matrix: Soil

MS Sample Id: 681035-003 S

Prep Method: SW5035A

Date Prep: 12.16.2020

MSD Sample Id: 681035-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0664	66	0.0562	57	70-130	17	35	mg/kg	12.16.2020 15:57	X
Toluene	<0.00201	0.101	0.0830	82	0.0785	79	70-130	6	35	mg/kg	12.16.2020 15:57	
Ethylbenzene	<0.00201	0.101	0.0897	89	0.0886	89	70-130	1	35	mg/kg	12.16.2020 15:57	
m,p-Xylenes	<0.00402	0.201	0.153	76	0.153	77	70-130	0	35	mg/kg	12.16.2020 15:57	
o-Xylene	<0.00201	0.101	0.0827	82	0.0763	77	70-130	8	35	mg/kg	12.16.2020 15:57	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag				Units	Analysis Date	
1,4-Difluorobenzene			82		76		70-130			%	12.16.2020 15:57	
4-Bromofluorobenzene			95		94		70-130			%	12.16.2020 15:57	

MS/MSD Percent Recovery  
Relative Percent Difference  
LCS/LCSD Recovery  
Log Difference

$[D] = 100 * (C-A) / B$   
 $RPD = 200 * |(C-E) / (C+E)|$   
 $[D] = 100 * (C) / [B]$   
 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



**ASSOCIATES, Inc.**  
Environmental Consultants

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

DATE: 12/15/2020  
PO#: \_\_\_\_\_  
PROJECT LOCATION OR N

# CHAIN-OF-CUSTODY

Data Reported to:

**Eurofins Xenco, LLC**  
**Prelogin/Nonconformance Report- Sample Log-In**

**Client:** Larson and Associates, Inc.

**Date/ Time Received:** 12.15.2020 10.42.00 AM

**Work Order #:** 681077

Acceptable Temperature Range: 0 - 6 degC  
Air and Metal samples Acceptable Range: Ambient  
Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.9
#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: 12.15.2020

**Checklist reviewed by:**

  
Holly Taylor

Date: 12.18.2020

## **Appendix B**

### **Photographs**



## TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

\*REQUIRED INFORMATION\*

Company Man Contact Information

Name \_\_\_\_\_

Phone No. \_\_\_\_\_

## GENERATOR

NO.

211125

Operator No.

Daron

Permit/RRC No.

Operators Name

Lease/Well

Address

Name &amp; No.

City, State, Zip

County

Phone No.

API No.

Rig Name &amp; No.

AFE/PO No.

## EXEMPT E&amp;P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds  
Oil Based Cuttings  
Water Based Muds  
Water Based Cuttings  
Produced Formation Solids  
Tank Bottoms  
E&P Contaminated Soil  
Gas Plant Waste

## NON-INJECTABLE WATERS

Washout Water (Non-Injectable)  
Completion Fluid/Flow back (Non-Injectable)  
Produced Water (Non-Injectable)  
Gathering Line Water/Waste (Non-Injectable)  
**INTERNAL USE ONLY**  
Truck Washout (exempt waste)

## OTHER EXEMPT WASTES (type and generation process of the waste)

Belly

WASTE GENERATION PROCESS:

 DRILLING COMPLETION PRODUCTION GATHERING LINES

## NON-EXEMPT E&amp;P Waste/Service Identification and Amount

All non-exempt E&amp;P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other

\*please select from Non-Exempt Waste List on back

## QUANTITY

B - BARRELS

20

Y - YARDS

E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

 RCRA EXEMPT:

Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

 RCRA NON-EXEMPT:

Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

 MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

## TRANSPORTER

Transporter's

JMT

Driver's Name

Name

Print Name

Address

Phone No.

Phone No.

Truck No.

12-1-20  
SHIPMENT DATEFST Driver  
DRIVER'S SIGNATURE12-1-20  
DELIVERY DATEFST Driver  
DRIVER'S SIGNATURE3-33PM  
IN: 3-33PM OUT:

## DISPOSAL FACILITY

## RECEIVING AREA

Name/No.

DI

Site Name/  
Permit No.

Red Bluff Facility/ STF-065

Phone No.

432-448-4239

Address

5053 US Highway 285, Orla, TX 79770

NORM READINGS TAKEN? (Circle One)  
Chloride

Chemical Analysis (Mg/l)

YES

NO

If YES, was reading &gt; 50 micro roentgens? (circle one)

YES

Conductivity  
(mmhos/cm)

NO

pH

## TANK BOTTOMS

Feet

Inches

1st Gauge  
2nd Gauge  
Received


BS&W/BBLS Received		BS&W (%)
Free Water		
Total Received		

I hereby certify that the above load material has been (circle one):

ACCEPTED

DENIED

If denied, why?

Mary Naranjo 12-1-20

REI

Mary Naranjo

NAME (PRINT)

DATE

TITLE

SIGNATURE

**CHEVRON  
MCBU**

## Carlsbad, NM

NO #CAR-3382		NON-HAZARDOUS WASTE MANIFEST			1. PAGE <u>1</u> OF <u>4</u>	2. TRAILER NO. <u>162</u>
G E N E R A T O R	3. COMPANY NAME <b>CHEVRON CARLSBAD</b> PHONE NO. <b>575-887-5676</b>	4. ADDRESS <b>3150 E. GREENE ST.</b> CITY <b>CARLSBAD, NM 88220</b> STATE ZIP	5. PICK-UP DATE <b>12-1-2020</b> 6.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: <b>Contaminated Soil O,I + PW</b>	8. CONTAINERS No. <b>1</b> Type <b>BD</b>	9. TOTAL QUANTITY <b>20yds</b>	10. UNIT WT/VOL.	11.	
	a. <b>API - 30015410470001</b>					
	b. <b>Cost Code UCRE12000</b>					
	c.					
	d.					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: <b>Skew 2 Wellsite Clean up</b>	13. WASTE PROFILE NO.				
14. IN CASE OF EMERGENCY OR SPILL, CONTACT <b>CHEVRON CARLSBAD</b>	24-HOUR EMERGENCY NO. <b>575-887-5676</b>					
15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.						
T R A N S P O R T E R S	PRINTED TYPED NAME <b>STEPHEN POF CVX</b>	SIGNATURE <b>Steph Pof CVX</b>	DATE <b>12-1-2020</b>			
	16. TRANSPORTER (1) NAME <b>Stephen Pof</b> <b>RBM</b>	17. TRANSPORTER (2) NAME				
	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:				
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME <b>Jack Laff</b> SIGNATURE <b>Jack Laff</b> DATE <b>12-1-2020</b>	19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME _____ SIGNATURE _____ DATE _____				
	D F I A S C P I O L S I A T L Y	ADDRESS: <b>Environmental Solutions - Red Bluff</b> <b>5053 US Highway 285</b> Orla, TX 79770 <b>432-448-4239</b>	PHONE:			
	PERMIT NO.					
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
AUTHORIZED SIGNATURE <b>Maria Nancarrow</b>	CELL NO. <b>DI</b>	DATE <b>12-01-20</b>	TIME <b>3:33PM</b>			

Disposal Site: Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220



## TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

\*REQUIRED INFORMATION\*

Company Man Contact Information

Name \_\_\_\_\_

Phone No. \_\_\_\_\_

## GENERATOR

NO.

211131

Operator No.

Jewson

Permit/RRC No.

Operators Name

Lease/Well

Name &amp; No.

County

API No.

Rig Name &amp; No.

AFE/PO No.

City, State, Zip

Sheen 22627 stat 7-H

Phone No.

30-015 41047

## EXEMPT E&amp;P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings	Washout Water (Non-Injectable)	
Water Based Muds	Completion Fluid/Flow back (Non-Injectable)	
Water Based Cuttings	Produced Water (Non-Injective)	
Produced Formation Solids	Gathering Line Water/Waste (Non-Injective)	
Tank Bottoms	INTERNAL USE ONLY	
E&P Contaminated Soil	Truck Washout (exempt waste)	Bolts
Gas Plant Waste		

WASTE GENERATION PROCESS:  DRILLING  COMPLETION  PRODUCTION  GATHERING LINES

## NON-EXEMPT E&amp;P Waste/Service Identification and Amount

All non-exempt E&amp;P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other \_\_\_\_\_

\*please select from Non-Exempt Waste List on back

QUANTITY

B - BARRELS

20

Y - YARDS

E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

 RCRA EXEMPT:

Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

 RCRA NON-EXEMPT:

Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

 MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

## TRANSPORTER

Transporter's Name

JHJ

Driver's Name

Brook H...-...

Address

Phone No.

Print Name

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

12-1-20

F. Blum

12-1-20

F. Blum

SHIPMENT DATE

DRIVER'S SIGNATURE

DELIVERY DATE

DRIVER'S SIGNATURE

IN: 1:51PM

TRUCK TIME STAMP

OUT: \_\_\_\_\_

## DISPOSAL FACILITY

Site Name/

Red Bluff Facility/ STF-065

Phone No.

432-448-4239

Permit No.

5053 US Highway 285, Orla, TX 79770

Address

NORM READINGS TAKEN? (Circle One)

YES

NO

If YES, was reading &gt; 50 micro roentgens? (circle one)

YES

NO

Conductivity (mmhos/cm)

pH

Chloride

Chemical Analysis (Mg/l) \_\_\_\_\_

## TANK BOTTOMS

Feet

Inches

1st Gauge


2nd Gauge

BS&amp;W/BBLS Received

BS&amp;W (%)

Received

Free Water

Total Received

I hereby certify that the above load material has been (circle one):

ACCEPTED

DENIED

If denied, why?

12-01-20

roc

TITLE

MMVANnote

SIGNATURE

NAME (PRINT)

DATE

**CHEVRON  
MCBU**

## **Carlsbad, NM**

NO #CAR-3030		NON-HAZARDOUS WASTE MANIFEST			1. PAGE <u>1</u> OF <u>1</u>	2. TRAILER NO.		
<b>G E N E R A T O R  T R A N S P O R T E R S</b>	3. COMPANY NAME <b>CHEVRON CARLSBAD</b> PHONE NO. <b>575-887-5676</b>		4. ADDRESS <b>3150 E. GREENE ST.</b> CITY <b>CARLSBAD, NM 88220</b> STATE ZIP		5. PICK-UP DATE <b>12/12/2012</b>			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: <i>Contaminated Soil Oil &amp; Dex</i>		8. CONTAINERS No. Type		9. TOTAL QUANTITY	10. UNIT WT/VOL	11.	
	a. <b>APL - 30615-10-170001</b>		1 BD		<b>4000 lbs</b>			
	b. <b>1st CKE - 1MRE 12/12/12</b>							
	c.							
	d.							
	12. COMMENTS OR SPECIAL INSTRUCTIONS: <i>SKEIN 2 wellsite clean up</i>					13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT <b>CHEVRON CARLSBAD</b>							
	24-HOUR EMERGENCY NO. <b>575-887-5676</b>							
	15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.							
PRINTED TYPED NAME <i>STEPHEN B. EVX DEX</i>			SIGNATURE <i>Stephen B. Dex</i>			DATE <i>12-12-12</i>		
16. TRANSPORTER (1) NAME <i>John L. Jones</i>			17. TRANSPORTER (2) NAME <i>John L. Jones</i>					
IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:			IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:					
18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME <i>John L. Jones</i>			19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME <i>John L. Jones</i>					
SIGNATURE <i>John L. Jones</i>			SIGNATURE <i>John L. Jones</i>			DATE <i>12/12/12</i>		
D F I A S C P I O L S I A T L Y		ADDRESS <b>R360 Environmental Solutions - Red Bluff</b> 5053 US Highway 285 Orla, TX 79770 <b>432-448-4239</b>			PHONE:			
PERMIT NO.		COMMENTS						
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.								
AUTHORIZED SIGNATURE <i>Maria Navarro</i>			CELL NO. <b>D1</b>	DATE <b>12/12/12</b>	TIME <b>11:51</b>			

Disposal Site: Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

GENERATOR: COPY 1

**TRANSPORTER: COPY 2**

DISPOSAL SITE: COPY 3 & 4



## TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

\*REQUIRED INFORMATION\*

Company Man Contact Information

Name \_\_\_\_\_

Phone No. \_\_\_\_\_

## GENERATOR

NO.

211132

Operator No.

Aaron

Permit/RRC No.

Operators Name

Lease/Well

Address

Name &amp; No.

City, State, Zip

County

Phone No.

API No.

Rig Name &amp; No.

AFE/PO No.

SKan 22627 State 7H  
30-015-91097  
#

## EXEMPT E&amp;P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds  
Oil Based Cuttings  
Water Based Muds  
Water Based Cuttings  
Produced Formation Solids  
Tank Bottoms  
E&P Contaminated Soil  
Gas Plant Waste

NON-INJECTABLE WATERS	
Washout Water (Non-Injectable)	
Completion Fluid/Flow back (Non-Injective)	
Produced Water (Non-Injective)	
Gathering Line Water/Waste (Non-Injective)	
INTERNAL USE ONLY	
Truck Washout (exempt waste)	

OTHER EXEMPT WASTES (type and generation process of the waste)

Bally

WASTE GENERATION PROCESS:  DRILLING  COMPLETION  PRODUCTION  GATHERING LINES

## NON-EXEMPT E&amp;P Waste/Service Identification and Amount

All non-exempt E&amp;P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other

\*please select from Non-Exempt Waste List on back

QUANTITY

B - BARRELS

20

Y - YARDS

E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

 RCRA EXEMPT:

Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

 RCRA NON-EXEMPT:

Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

 MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

## TRANSPORTER

Transporter's

JHT

Name

Address

Phone No.

Driver's Name

Freddy Hernandez

Print Name

Phone No.

162

Truck No.

D-120  
SHIPMENT DATEFreddy Hernandez  
DRIVER'S SIGNATURE12-1-20  
DELIVERY DATEFreddy Hernandez  
DRIVER'S SIGNATURE

IN: 12:00 AM TRUCK TIME STAMP

OUT: \_\_\_\_\_

## DISPOSAL FACILITY

## RECEIVING AREA

Name/No. D1

Site Name/  
Permit No.  
Address

Red Bluff Facility/ STF-065

Phone No.

432-448-4239

5053 US Highway 285, Orla, TX 79770

NORM READINGS TAKEN? (Circle One)  
Chloride  
Chemical Analysis (Mg/l) \_\_\_\_\_

YES

NO

If YES, was reading &gt; 50 micro roentgens? (circle one)

YES

NO

Conductivity  
(mmhos/cm) \_\_\_\_\_

pH

## TANK BOTTOMS

1st Gauge  
2nd Gauge  
Received

Feet

Inches

BS&W/BBLS Received	BS&W (%)
Free Water	
Total Received	

I hereby certify that the above load material has been (circle one):

ACCEPTED

12-01-20

DENIED

Rec

If denied, why?

MNanano

SIGNATURE

## CHEVRON

MCBU

Carlsbad, NM

NO #CAR- 3378 NON-HAZARDOUS WASTE MANIFEST 1. PAGE 1 OF 4 2. TRAILER NO.

<b>G</b>	3. COMPANY NAME CHEVRON CARLSBAD	4. ADDRESS 3150 E. GREENE ST. CITY STATE ZIP CARLSBAD, NM 88220	5. PICK-UP DATE 12-1-2020
	PHONE NO. 575-887-5676		6.
<b>E</b>	7. NAME OR DESCRIPTION OF WASTE SHIPPED: <i>Contaminated Soil 0.1 + Pw</i>	8. CONTAINERS No. Type	9. TOTAL QUANTITY 10. UNIT WT/VOL 11.
<b>N</b>	a. API - 30015410470001	1 BD	20yds
<b>E</b>	b. Post Code - UCRE 12000		
<b>R</b>	c.		
<b>A</b>	d.		
12. COMMENTS OR SPECIAL INSTRUCTIONS: <i>Well Site Clean up SKIN 2</i>			13. WASTE PROFILE NO.
<b>T</b>	14. IN CASE OF EMERGENCY OR SPILL, CONTACT CHEVRON CARLSBAD 24-HOUR EMERGENCY NO. 575-887-5676		
<b>O</b>	15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.		
<b>R</b>	PRINTED/TYPED NAME <i>Stephen Poe CVX</i>	SIGNATURE <i>Stephen Poe CVX</i>	DATE 12-1-2020
<b>T</b>	16. TRANSPORTER (1) NAME <i>Stephen Poe CVX</i>	17. TRANSPORTER (2) NAME	
<b>R</b>	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: (575) 232-1583	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:	
<b>A</b>	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME <i>Stephen Poe CVX</i>	19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME	
<b>N</b>	SIGNATURE <i>Stephen Poe CVX</i>	SIGNATURE	DATE
<b>S</b>	R360 ADDRESS: Environmental Solutions - Red Bluff 5053 US Highway 285	PHONE:	
<b>C</b>	PERMIT NO. Orla, TX 79770 432-448-4239	20. COMMENTS	
<b>P</b>	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.		
<b>I</b>	AUTHORIZED SIGNATURE <i>Maria Navarrete</i>	CELL NO. D1	DATE 12-01-20
<b>A</b>			TIME 12:00PM
<b>T</b>			
<b>L</b>			
<b>Y</b>			

Disposal Site: Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220



## TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

\*REQUIRED INFORMATION\*

Company Man Contact Information

Name \_\_\_\_\_

Phone No. \_\_\_\_\_

## GENERATOR

NO.

211133

Operator No.

Chevron

Operators Name

Address

City, State, Zip

Phone No.

Permit/RRC No.

Lease/Well

Name &amp; No.

County

API No.

Rig Name &amp; No.

AFE/PO No.

Skeen 22027 State 2H  
30015-41041

## EXEMPT E&amp;P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds  
Oil Based Cuttings  
Water Based Muds  
Water Based Cuttings  
Produced Formation Solids  
Tank Bottoms  
E&P Contaminated Soil  
Gas Plant Waste

## NON-INJECTABLE WATERS

Washout Water (Non-Injectable)  
Completion Fluid/Flow back (Non-Injectable)  
Produced Water (Non-Injectable)  
Gathering Line Water/Waste (Non-Injectable)  
**INTERNAL USE ONLY**  
Truck Washout (exempt waste)

## OTHER EXEMPT WASTES (type and generation process of the waste)

Bull Creek

WASTE GENERATION PROCESS:  DRILLING  COMPLETION  PRODUCTION  GATHERING LINES

## NON-EXEMPT E&amp;P Waste/Service Identification and Amount

All non-exempt E&amp;P waste must be analysed and be below the threshold limits for toxicity (TCPL), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other

\*please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

 RCRA EXEMPT:

Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

 RCRA NON-EXEMPT:

Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

 MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

## TRANSPORTER

Transporter's Name  
Address

JHT

Driver's Name

Phone No.

Print Name

Greg Harris

Phone No.

162

Truck No.

SHIPMENT DATE  
12-1-20DRIVER'S SIGNATURE  
T. H.

12-1-20

DRIVER'S SIGNATURE  
F. H.

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below

DISPOSAL FACILITY

## DISPOSAL FACILITY

## RECEIVING AREA

Name/No.

DI

Site Name/  
Permit No.  
Address

Red Bluff Facility/ STF-065

Phone No.

432-448-4239

5053 US Highway 285, Orla, TX 79770

NORM READINGS TAKEN? (Circle One)  
Chloride  
Chemical Analysis (Mg/l)YES  
NOIf YES, was reading > 50 micro roentgens? (circle one)  
Conductivity  
(mmhos/cm)

YES

NO

pH

## TANK BOTTOMS

1st Gauge  
2nd Gauge  
ReceivedFeet  
InchesBS&W/BBLS Received  
Free Water  
Total Received

I hereby certify that the above load material has been (circle one):

ACCEPTED

DENIED

If denied, why?

NAME (PRINT)

DATE

TITLE

SIGNATURE

**CHEVRON  
MCBU**

## **Carlsbad, NM**

NO #CAR-100		NON-HAZARDOUS WASTE MANIFEST			1. PAGE 1 OF 4	2. TRAILER NO.
G E N E R A T O R T R A N S P O R T E R S	3. COMPANY NAME <b>CHEVRON CARLSBAD</b> PHONE NO. <b>575-887-5676</b>		4. ADDRESS <b>3150 E. GREENE ST.</b> CITY <b>CARLSBAD, NM 88220</b> STATE ZIP		5. PICK-UP DATE <b>15-1-2024</b>	
					6.	
T R A N S P O R T E R S	7. NAME OR DESCRIPTION OF WASTE SHIPPED: <b>Contaminated Soil Ditch Site</b>			8. CONTAINERS No.   Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
	a.	<b>All API - 30015416475001</b>		1   31	50.00	
	b.	<b>Permittee Cost Code HCR 12000</b>				
	c.					
	d.					
12. COMMENTS OR SPECIAL INSTRUCTIONS: <b>Well site clean up</b>					13. WASTE PROFILE NO.	
14. IN CASE OF EMERGENCY OR SPILL, CONTACT <b>CHEVRON CARLSBAD</b>					24-HOUR EMERGENCY NO. <b>575-887-5676</b>	
15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.						
PRINTED TYPED NAME <b>STEPHEN ROR CAR</b>				SIGNATURE <b>Stephen Ror CAR</b>		DATE <b>15-1-2024</b>
D F I S C P I O L S I A T L Y	16. TRANSPORTER (1) NAME <b>John Doe</b>			17. TRANSPORTER (2) NAME <b>John Doe</b>		
	IN CASE OF EMERGENCY CONTACT: <b>John Doe</b>			IN CASE OF EMERGENCY CONTACT: <b>John Doe</b>		
	EMERGENCY PHONE: <b>131-333-1333</b>			EMERGENCY PHONE: <b>131-333-1333</b>		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME <b>John Doe</b>			19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME <b>John Doe</b>		
	SIGNATURE <b>John Doe</b> DATE <b>15-1-2024</b>			SIGNATURE <b>John Doe</b> DATE <b>15-1-2024</b>		
ADDRESS: <b>5053 US Highway 285</b> <b>Otis, TX 79770</b>		PHONE: <b>432-448-4230</b>		20. COMMENTS		
PERMIT NO.						
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.						
AUTHORIZED SIGNATURE <b>Maria Navarrete</b>			CELL NO.	DATE	TIME	
			<b>D1</b>	<b>12-01-24</b>	<b>10:38 AM</b>	

**Disposal Site:** Please complete Disposal Facility section at bottom of form and  
Site Address: 3150 E. Greene St. Carlsbad, NM 88220

Disposal Site: Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220



## TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

\*REQUIRED INFORMATION\*

Company Man Contact Information

Name \_\_\_\_\_

Phone No. \_\_\_\_\_

## GENERATOR

Operator No.

Chevron

Permit/RRC No.

NO.

212866

Operators Name

Lease/Well

Address

Name &amp; No.

City, State, Zip

County

Phone No.

API No.

Rig Name &amp; No.

AFE/PO No.

Skelton 2427  
Shale 241

30015410470001

## EXEMPT E&amp;P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds \_\_\_\_\_  
 Oil Based Cuttings \_\_\_\_\_  
 Water Based Muds \_\_\_\_\_  
 Water Based Cuttings \_\_\_\_\_  
 Produced Formation Solids \_\_\_\_\_  
 Tank Bottoms \_\_\_\_\_  
 E&P Contaminated Soil \_\_\_\_\_  
 Gas Plant Waste \_\_\_\_\_

## NON-INJECTABLE WATERS

Washout Water (Non-Injectable) \_\_\_\_\_

Completion Fluid/Flow back (Non-Injectable) \_\_\_\_\_

Produced Water (Non-Injectable) \_\_\_\_\_

Gathering Line Water/Waste (Non-Injectable) \_\_\_\_\_

## INTERNAL USE ONLY

Truck Washout (exempt waste) \_\_\_\_\_

## OTHER EXEMPT WASTES (type and generation process of the waste)

Be 11/1

WASTE GENERATION PROCESS:

 DRILLING COMPLETION PRODUCTION GATHERING LINES

## NON-EXEMPT E&amp;P Waste/Service Identification and Amount

All non-exempt E&amp;P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other \_\_\_\_\_

\*please select from Non-Exempt Waste List on back

QUANTITY

B - BARRELS

Y - YARDS

E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

 RCRA EXEMPT:

Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

 RCRA NON-EXEMPT:

Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

 MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

## TRANSPORTER

Transporter's Name

Driver's Name

Address

Print Name

Phone No.

Phone No.

Truck No.

Fabian Contreras

12-1-20

SHIPMENT DATE

12-1-20

DELIVERY DATE

DRIVER'S SIGNATURE

DRIVER'S SIGNATURE

TRUCK TIME STAMP  
IN: 3:30PM OUT: \_\_\_\_\_

## DISPOSAL FACILITY

## RECEIVING AREA

Name/No. DL

Site Name/  
Permit No.

Red Bluff Facility/ STF-065

Phone No.

432-448-4239

Address

5053 US Highway 285, Orla, TX 79770

Phone No.

432-448-4239

NORM READINGS TAKEN? (Circle One)

YES

NO

If YES, was reading &gt; 50 micro roentgens? (circle one)

YES

NO

Conductivity

(mmhos/cm)

pH

Chemical Analysis (Mg/l)

## TANK BOTTOMS

Feet

Inches

1st Gauge  
2nd Gauge  
Received


BS&W/BBLS Received	BS&W (%)
Free Water	
Total Received	

I hereby certify that the above load material has been (circle one).

ACCEPTED

DENIED

If denied, why?

NAME (PRINT)

DATE

TITLE

SIGNATURE

**CHEVRON  
MCBU**

## **Carlsbad, NM**

**Disposal Site:** Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220



## TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

\*REQUIRED INFORMATION\*

Company Man Contact Information

Name \_\_\_\_\_

Phone No. \_\_\_\_\_

Operator No.

Chevron

## GENERATOR

NO.

212869

Operators Name

Address

City, State, Zip

Phone No.

Permit/RRC No.

Lease/Well  
Name & No.

County

API No.

Rig Name &amp; No.

AFE/PO No.

Skeen 22027 State 2H  
30015-41047

## EXEMPT E&amp;P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds	NON-INJECTABLE WATERS
Oil Based Cuttings	Washout Water (Non-Injectable)
Water Based Muds	Completion Fluid/Flow back (Non-Injectable)
Water Based Cuttings	Produced Water (Non-Injectable)
Produced Formation Solids	Gathering Line Water/Waste (Non-Injectable)
Tank Bottoms	INTERNAL USE ONLY
E&P Contaminated Soil	Truck Washout (exempt waste)
Gas Plant Waste	

## OTHER EXEMPT WASTES (type and generation process of the waste)

Belly

WASTE GENERATION PROCESS:

 DRILLING COMPLETION PRODUCTION GATHERING LINES

## NON-EXEMPT E&amp;P Waste/Service Identification and Amount

All non-exempt E&amp;P waste must be analysed and be below the threshold limits for toxicity (TCP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other

\*please select from Non-Exempt Waste List on back

QUANTITY

B - BARRELS

Y - YARDS

20

E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

 RCRA EXEMPT:

Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

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 MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

## TRANSPORTER

Transporter's

RXM

Name

Address

Phone No.

Driver's Name

Print Name

Phone No.

Truck No.

Ruben Contreras

179

SHIPMENT DATE

DRIVER'S SIGNATURE

DELIVERY DATE

DRIVER'S SIGNATURE

TRUCK TIME STAMP

IN: 10:41 AM OUT:

## DISPOSAL FACILITY

## RECEIVING AREA

Name/No.

Site Name/  
Permit No.  
Address

Red Bluff Facility/ STF-065

Phone No.

432-448-4239

5053 US Highway 285, Orla, TX 79770

NORM READINGS TAKEN? (Circle One)  
Chloride

Chemical Analysis (Mg/l)

YES  
NOIf YES, was reading > 50 micro roentgens? (circle one)  
Conductivity  
(mmhos/cm)

YES

NO

pH

## TANK BOTTOMS

1st Gauge  
2nd Gauge  
Received

Feet

Inches

BS&W/BBLS Received	BS&W (%)
Free Water	
Total Received	

I hereby certify that the above load material has been (circle one):

ACCEPTED

DENIED

If denied, why?

Mariannavante

120120

REC

Mariannavante

SIGNATURE

NAME (PRINT)

DATE

TITLE

**CHEVRON  
MCBU**

## **Carlsbad, NM**

NO #CAR- <del>0000</del>		NON-HAZARDOUS WASTE MANIFEST		1. PAGE <u>1</u> OF <u>1</u>	2. TRAILER NO. <u>PP-1</u>	
G E N E R A T O R T R A N S P O R T E R S	3. COMPANY NAME <b>CHEVRON CARLSBAD</b> PHONE NO. <b>575-887-5676</b>		4. ADDRESS <b>3150 E. GREENE ST.</b> CITY <b>CARLSBAD, NM 88220</b> STATE ZIP		5. PICK-UP DATE <b>12-1-2020</b> 6.	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: <i>Contaminated Soil</i>			8. CONTAINERS No. <b>1</b> Type <b>BB</b>	9. TOTAL QUANTITY <b>400 lbs</b>	10. UNIT WT/VOL.
	a. API: 30015410470001					
	b. Cost Code: <i>ACRE 12000</i>					
	c.					
	d.					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: <i>Well Site Clean up SKipped</i>					13. WASTE PROFILE NO.
14. IN CASE OF EMERGENCY OR SPILL, CONTACT <b>CHEVRON CARLSBAD</b> 24-HOUR EMERGENCY NO. <b>575-887-5676</b>						
15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.						
D F I S C P I O L S I A T L Y	PRINTED/TYPED NAME <i>Vickey</i>		SIGNATURE		DATE	
	16. TRANSPORTER (1) NAME <i>John Daniels</i>		17. TRANSPORTER (2) NAME			
IN CASE OF EMERGENCY CONTACT: <i>723-282-1503</i>		IN CASE OF EMERGENCY CONTACT:				
EMERGENCY PHONE:		EMERGENCY PHONE:				
18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME <i>John Daniels</i>		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME <i>John Daniels</i>				
SIGNATURE <i>John Daniels</i> DATE <i>12-1-2020</i>		SIGNATURE <i>John Daniels</i> DATE <i>12-1-2020</i>				
		ADDRESS:		PHONE:		
PERMIT NO.		20. COMMENTS				
21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.						
AUTHORIZED SIGNATURE <i>Maria Navaneel</i>			CELL NO. <b>DI</b>	DATE <b>10:40AM</b>	TIME <b>12-1-20</b>	

**Disposal Site:** Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220



## TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

\*REQUIRED INFORMATION\*

Company Man Contact Information

Name \_\_\_\_\_

Phone No. \_\_\_\_\_

Operator No. Chevron

Operators Name

Address

City, State, Zip

Phone No.

## GENERATOR

NO.

212870

Permit/RRC No.

Lease/Well

Name &amp; No.

County

API No.

Rig Name &amp; No.

AFE/PO No.

Skeen 2 Shallow  
Eddy  
30013410470001

## EXEMPT E&amp;P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds \_\_\_\_\_  
 Oil Based Cuttings \_\_\_\_\_  
 Water Based Muds \_\_\_\_\_  
 Water Based Cuttings \_\_\_\_\_  
 Produced Formation Solids \_\_\_\_\_  
 Tank Bottoms \_\_\_\_\_  
 E&P Contaminated Soil X  
 Gas Plant Waste \_\_\_\_\_

## NON-INJECTABLE WATERS

Washout Water (Non-Injectable) \_\_\_\_\_

Completion Fluid/Flow back (Non-Injectable) \_\_\_\_\_

Produced Water (Non-Injectable) \_\_\_\_\_

Gathering Line Water/Waste (Non-Injectable) \_\_\_\_\_

## INTERNAL USE ONLY

Truck Washout (exempt waste) \_\_\_\_\_

## OTHER EXEMPT WASTES (type and generation process of the waste)

Belly

WASTE GENERATION PROCESS:

 DRILLING COMPLETION PRODUCTION GATHERING LINES

## NON-EXEMPT E&amp;P Waste/Service Identification and Amount

All non-exempt E&amp;P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other \_\_\_\_\_

\*please select from Non-Exempt Waste List on back

QUANTITY

B - BARRELS

BARRELS

E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

 RCRA EXEMPT:

Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

 RCRA NON-EXEMPT:

Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

 MSDS Information RCRA Hazardous Waste Analysis Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

## TRANSPORTER

Transporter's Name

Ron

Driver's Name

Address

JHT

Print Name

Phone No.

Phone No.

Truck No.

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

12-1-20

Ron

DRIVER'S SIGNATURE

12-1-20

Ron

DRIVER'S SIGNATURE

SHIPMENT DATE

TIME STAMP

IN: 1:54PM OUT: \_\_\_\_\_

NORM READINGS TAKEN? (Circle One)

 YES NO

Chloride

IF YES, was reading &gt; 50 micro roentgens? (circle one)

YES

 NO

Chemical Analysis (Mg/l)

Conductivity

(mmhos/cm)

pH

## DISPOSAL FACILITY

## RECEIVING AREA

Name/No. MSite Name/  
Permit No.

Red Bluff Facility/ STF-065

Phone No.

432-448-4239

Address

5053 US Highway 285, Orla, TX 79770

NORM READINGS TAKEN? (Circle One)

 YES NO

Chloride

IF YES, was reading &gt; 50 micro roentgens? (circle one)

YES

 NO

Chemical Analysis (Mg/l)

Conductivity

(mmhos/cm)

pH

## TANK BOTTOMS

Feet

Inches

1st Gauge  
2nd Gauge  
Received

BS&amp;W/BBLS Received

BS&amp;W (%)

Free Water

Total Received

I hereby certify that the above load material has been (circle one):

ACCEPTED

DENIED

If denied, why?

Marin Navarro

12-1-20

PecMarin Navarro

SIGNATURE

NAME (PRINT)

DATE

TITLE

**CHEVRON  
MCBU**

## Carlsbad, NM

Disposal Site: Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220



## TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

\*REQUIRED INFORMATION\* Name \_\_\_\_\_  
Phone No. \_\_\_\_\_

Operator No.	GENERATOR		NO.
<i>Chellon</i>	Permit/RRC No.	212871	
Operators Name	Lease/Well		
Address	Name & No.		
City, State, Zip	County		
Phone No.	API No.		
	Rig Name & No.		
	AFE/PO No.		

## EXEMPT E&amp;P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds Oil Based Cuttings Water Based Muds Water Based Cuttings Produced Formation Solids Tank Bottoms E&P Contaminated Soil Gas Plant Waste	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)  <i>Bell</i>
	Washout Water (Non-Injectable)	
	Completion Fluid/Flow back (Non-Injectable)	
	Produced Water (Non-Injectable)	
	Gathering Line Water/Waste (Non-Injectable)	
	INTERNAL USE ONLY	
	Truck Washout (exempt waste)	

WASTE GENERATION PROCESS:  DRILLING  COMPLETION  PRODUCTION  GATHERING LINES

## NON-EXEMPT E&amp;P Waste/Service Identification and Amount

All non-exempt E&amp;P waste must be analysed and be below the threshold limits for toxicity (TCP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other \*please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS Y - YARDS E - EACH *(Signature)*

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

 MSDS Information  RCRA Hazardous Waste Analysis  Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE

DATE

SIGNATURE

## TRANSPORTER

Transporter's Name *Ron*  
 Address *SHIT*  
 Phone No.

Driver's Name

Print Name

Phone No.

Truck No.

*Fabio Contreras**179*I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.  
 IN: *12-1-20* OUT: *12-1-20* SHIPMENT DATE DRIVER'S SIGNATURE DELIVERY DATE DRIVER'S SIGNATURE

IN: <i>12-2-20</i>	TRUCK TIME STAMP	DISPOSAL FACILITY	RECEIVING AREA
OUT: <i>12-2-20</i>			Name/No. _____

Site Name/ Permit No.	Red Bluff Facility/ STF-065	Phone No.	432-448-4239
Address	5053 US Highway 285, Orla, TX 79770		

NORM READINGS TAKEN? (Circle One)	YES	NO	If YES, was reading > 50 micro roentgens? (circle one)	YES	NO
Chloride			Conductivity		
Chemical Analysis (Mg/l)			(mmhos/cm)		

## TANK BOTTOMS

Feet	Inches	BS&W/BBLS Received	BS&W (%)
1st Gauge			
2nd Gauge			
Received		Total Received	

I hereby certify that the above load material has been (circle one):	ACCEPTED	DENIED	If denied, why?	SIGNATURE
<i>Marlu Navarrete</i>	<i>Dozo</i>	<i>Rec</i>	<i>MUNument</i>	<i>(Signature)</i>
NAME (PRINT)	DATE	TITLE		

**CHEVRON**  
**MCBU**

**Carlsbad, NM**

NO #CAR-3379

**NON-HAZARDOUS WASTE MANIFEST**

1. PAGE        OF        2. TRAILER NO.       

<b>G E N E R A T O R</b>	3. COMPANY NAME <b>CHEVRON CARLSBAD</b>		4. ADDRESS 3150 E. GREENE ST. CITY STATE ZIP CARLSBAD, NM 88220		5. PICK-UP DATE <u>12-1-2020</u>	
	PHONE NO. <b>575-887-5676</b>				6.	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: <i>Concrete Slab Removal</i>				8. CONTAINERS No. <u>      </u> Type <u>      </u>	9. TOTAL QUANTITY <u>      </u>
	a. <u>      </u>					
	b. <u>      </u>					
	c. <u>      </u>					
	d. <u>      </u>					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: <i>Well Site Clean Up SK-0017</i>				13. WASTE PROFILE NO.	
	14. <b>IN CASE OF EMERGENCY OR SPILL, CONTACT</b>				24-HOUR EMERGENCY NO. <b>575-887-5676</b>	
	<b>CHEVRON CARLSBAD</b>				15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.	
<b>T R A N S P O R T E R S</b>	PRINTED TYPED NAME <i>Stephen Poy</i>		SIGNATURE <i>Steph Poy</i>		DATE <u>12-1-2020</u>	
	16. <b>TRANSPORTER (1)</b> NAME		17. <b>TRANSPORTER (2)</b> NAME			
	IN CASE OF EMERGENCY CONTACT:		IN CASE OF EMERGENCY CONTACT:			
	EMERGENCY PHONE: <u>      </u>		EMERGENCY PHONE: <u>      </u>			
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME <i>John Doe</i>		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME <u>      </u>			
	SIGNATURE <u>      </u> DATE <u>      </u>		SIGNATURE <u>      </u> DATE <u>      </u>			
			ADDRESS: <i>Environmental Solutions Inc.</i> <i>5053 US Highway 281</i> <i>Orla, TX 79777</i>		PHONE: <u>      </u>	
	PERMIT NO.					
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE <i>Marla Navarrete</i>		CELL NO. <u>      </u>	DATE <u>12-01-20</u>	TIME <u>12:26 PM</u>	

Disposal Site: Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220



## TEXAS NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT)

\*REQUIRED INFORMATION\*

Company Man Contact Information  
Name De Perez  
Phone No.

Operator No.	GENERATOR		NO.	214104
Operators Name			Permit/RRC No.	
Address			Lease/Well Name & No.	
City, State, Zip			County	
Phone No.			API No.	
			Rig Name & No.	
			AFE/PO No.	

## EXEMPT E&amp;P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds	NON-INJECTABLE WATERS	OTHER EXEMPT WASTES (type and generation process of the waste)
Oil Based Cuttings	Washout Water (Non-Injectable)	
Water Based Muds	Completion Fluid/Flow back (Non-Injective)	
Water Based Cuttings	Produced Water (Non-Injective)	
Produced Formation Solids	Gathering Line Water/Waste (Non-Injective)	
Tank Bottoms	INTERNAL USE ONLY	
E&P Contaminated Soil	Truck Washout (exempt waste)	
Gas Plant Waste		

WASTE GENERATION PROCESS:  DRILLING  COMPLETION  PRODUCTION  GATHERING LINES

## NON-EXEMPT E&amp;P Waste/Service Identification and Amount

All non-exempt E&amp;P waste must be analysed and be below the threshold limits for toxicity (TCLP), Ignitability, Corrosivity and Reactivity.

Non-Exempt Other \_\_\_\_\_ \*please select from Non-Exempt Waste List on back

QUANTITY B - BARRELS Y - YARDS 20 E - EACH

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

- RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)
- RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

 MSDS Information  RCRA Hazardous Waste Analysis  Other (Provide Description Below)

(PRINT) AUTHORIZED AGENTS SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_ SIGNATURE \_\_\_\_\_

## TRANSPORTER

Transporter's Name	<u>Fs trucking</u>	Driver's Name	<u>ENERGEE HASTOR</u>
Address		Print Name	
Phone No.		Phone No.	
		Truck No.	

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

12-14-20 Energy Hasto 12-14-20 Energy Hasto

IN: <u>3:24PM</u> TRUCK TIME STAMP	DISPOSAL FACILITY	RECEIVING AREA
OUT: _____		Name/No. <u>D-1</u>

Site Name/ Permit No.	Red Bluff Facility/ STF-065	Phone No.	432-448-4239
Address	5053 US Highway 285, Orla, TX 79770		

NORM READINGS TAKEN? (Circle One)	<input checked="" type="radio"/> YES	NO	If YES, was reading > 50 micro roentgens? (circle one)	YES <u>7</u> NO <u>pH</u>
Chloride			Conductivity (mmhos/cm)	
Chemical Analysis (Mg/l)				

## TANK BOTTOMS

Feet	Inches	BS&W/BBLS Received	BS&W (%)
1st Gauge			
2nd Gauge			
Received			

I hereby certify that the above load material has been (circle one):	ACCEPTED <u>12/14/20</u>	DENIED <u>Rec</u>	If denied, why?
NAME (PRINT)	DATE	TITLE	SIGNATURE <u>J. Caldron</u>

## CHEVRON

MCBU

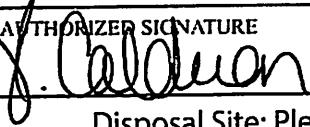
Carlsbad, NM

NO #CAR-3426

NON-HAZARDOUS WASTE MANIFEST

1. PAGE 1 OF 1

2. TRAILER NO.

G	3. COMPANY NAME CHEVRON CARLSBAD	4. ADDRESS 3150 E. GREENE ST.	5. PICK-UP DATE 12-14-2020			
	PHONE NO. 575-887-5676	CITY STATE CARLSBAD, NM 88220	ZIP 6.			
E	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT WT/VOL	11.
	a. Contaminated Dirt		1 Dump Truck	20 Yds		
	b. Skeen 2H Skeen 2H					
	c. API-30015410470001					
N	12. COMMENTS OR SPECIAL INSTRUCTIONS: Skeen 2H Remediation			13. WASTE PROFILE NO.		
A	14. IN CASE OF EMERGENCY OR SPILL, CONTACT CHEVRON CARLSBAD 575-887-5676					
T	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above.					
R	PRINTED/TYPED NAME Joe R Perez	SIGNATURE 	DATE 12-14-2020			
T	16. TRANSPORTER (1) NAME ENRIQUE ACOSTA	17. TRANSPORTER (2)				
	432 2023057	NAME				
R	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: 432-232-1580	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:				
S	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME	19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME				
	SIGNATURE	SIGNATURE				
P		ADDRESS:	PHONE:			
	PERMIT NO.	R360 Environmental Solutions - Red Bluff 5053 US Highway 285				
I	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE 	CELL NO.	DATE 12/14/20			
C	TIME 3:24 PM					

Disposal Site: Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

## CHEVRON

MCBU

Carlsbad, NM

NO #CAR-3426

## NON-HAZARDOUS WASTE MANIFEST

1. PAGE 1 OF 1

2. TRAILER NO.

<b>G</b> <b>E</b> <b>N</b> <b>E</b> <b>R</b> <b>A</b>	3. COMPANY NAME CHEVRON CARLSBAD	4. ADDRESS 3150 E. GREENE ST.	5. PICK-UP DATE 12-14-2020
	PHONE NO. 575-887-5676	CITY STATE CARLSBAD, NM 88220	ZIP 6.

<b>N</b> <b>E</b> <b>R</b> <b>A</b>	7. NAME OR DESCRIPTION OF WASTE SHIPPED: a. Contaminated Dirt	8. CONTAINERS No. 1	9. TOTAL QUANTITY Type Dump Truck 20 Yds	10. UNIT WT/VOL	11.
	b. Skeen 2H Skun 2627 Skuk 2H				
	c. API-30015410470001				
	d.				

<b>T</b> <b>O</b> <b>R</b> <b>R</b> <b>A</b>	12. COMMENTS OR SPECIAL INSTRUCTIONS: Skeen 2H Remediation	13. WASTE PROFILE NO.
	IN CASE OF EMERGENCY OR SPILL, CONTACT	

<b>T</b> <b>O</b> <b>R</b> <b>R</b> <b>A</b>	14. IN CASE OF EMERGENCY OR SPILL, CONTACT CHEVRON CARLSBAD	24-HOUR EMERGENCY NO. 575-887-5676
	15. GENERATOR'S CERTIFICATION: Hereby declare that the contents of this consignment are fully and accurately described above.	

<b>T</b> <b>R</b> <b>A</b> <b>N</b> <b>S</b> <b>P</b> <b>O</b> <b>R</b> <b>T</b> <b>E</b> <b>R</b> <b>S</b>	PRINTED TYPED NAME Joe R Perez	SIGNATURE <i>Joe R Perez</i>	DATE 12-14-2020
	16. TRANSPORTER (1) NAME ENRIQUE ALONSO 432 202 3057	17. TRANSPORTER (2)	

<b>D</b> <b>F</b> <b>I</b> <b>A</b> <b>S</b> <b>C</b> <b>P</b> <b>I</b> <b>O</b> <b>L</b> <b>S</b> <b>I</b> <b>A</b> <b>T</b> <b>L</b> <b>Y</b>	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE: 432 232 1580	IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME _____ SIGNATURE _____ DATE _____	19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME _____ SIGNATURE _____ DATE _____

<b>D</b> <b>F</b> <b>I</b> <b>A</b> <b>S</b> <b>C</b> <b>P</b> <b>I</b> <b>O</b> <b>L</b> <b>S</b> <b>I</b> <b>A</b> <b>T</b> <b>L</b> <b>Y</b>	ADDRESS: R360 Environmental Solutions - Red Bluff	PHONE:
	PERMIT NO. 5053 US Highway 285 Orta, TX 79770 432-448-4230	20. COMMENTS

<b>D</b> <b>F</b> <b>I</b> <b>A</b> <b>S</b> <b>C</b> <b>P</b> <b>I</b> <b>O</b> <b>L</b> <b>S</b> <b>I</b> <b>A</b> <b>T</b> <b>L</b> <b>Y</b>	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.
	AUTHORIZED SIGNATURE <i>J. M. Johnson</i>

Disposal Site: Please complete Disposal Facility section at bottom of form and mail copy of completed form to Chevron Carlsbad 3150 E. Greene St. Carlsbad, NM 88220

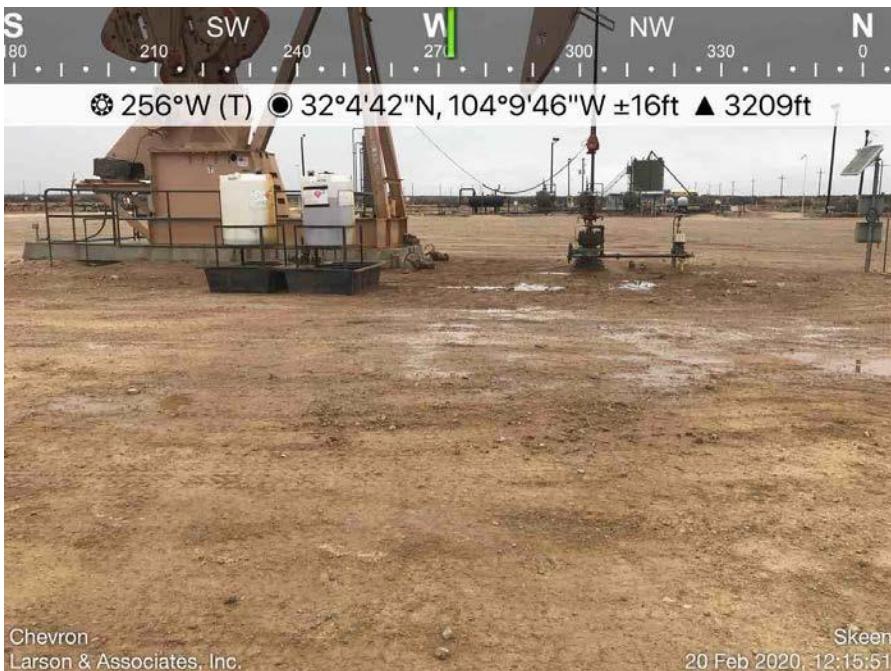
## **Appendix C**

### **Photographs**

nRM2004350563  
Closure Report  
Chevron USA, Inc., Skeen 2H Pumping Unit  
Produced Water Release  
December 29, 2020

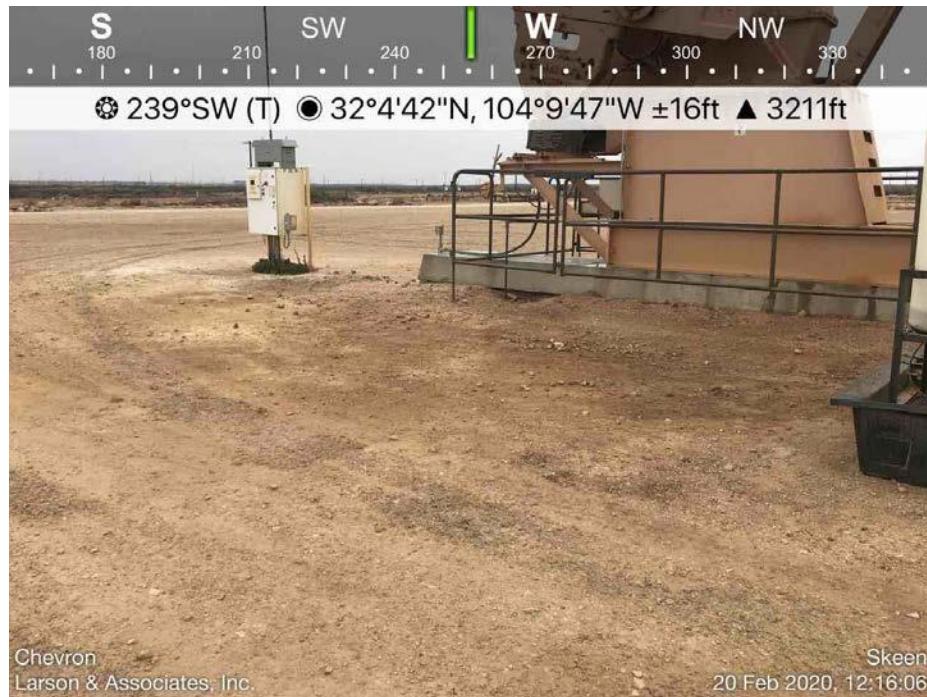


Impacted area viewing east, February 20, 2020



Impacted area viewing west, February 20, 2020

nRM2004350563  
Closure Report  
Chevron USA, Inc., Skeen 2H Pumping Unit  
Produced Water Release  
December 29, 2020

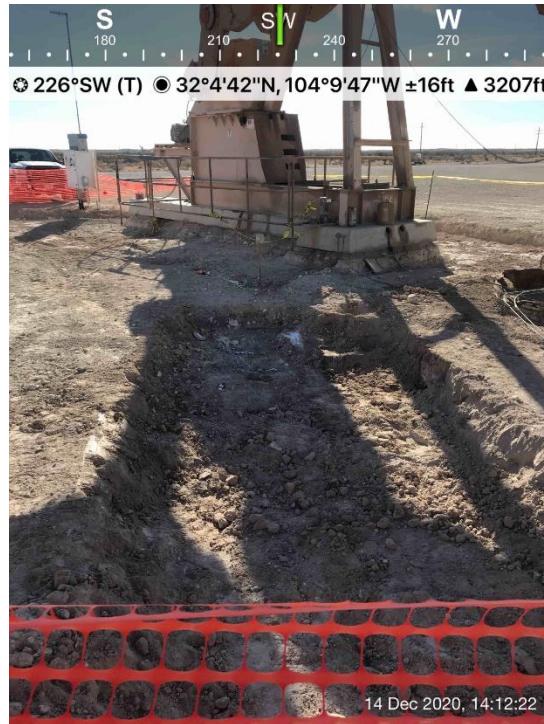


Impacted area viewing west/southwest, February 20, 2020



Excavated soil viewing north/northeast, December 14, 2020

nRM2004350563  
Closure Report  
Chevron USA, Inc., Skeen 2H Pumping Unit  
Produced Water Release  
December 29, 2020

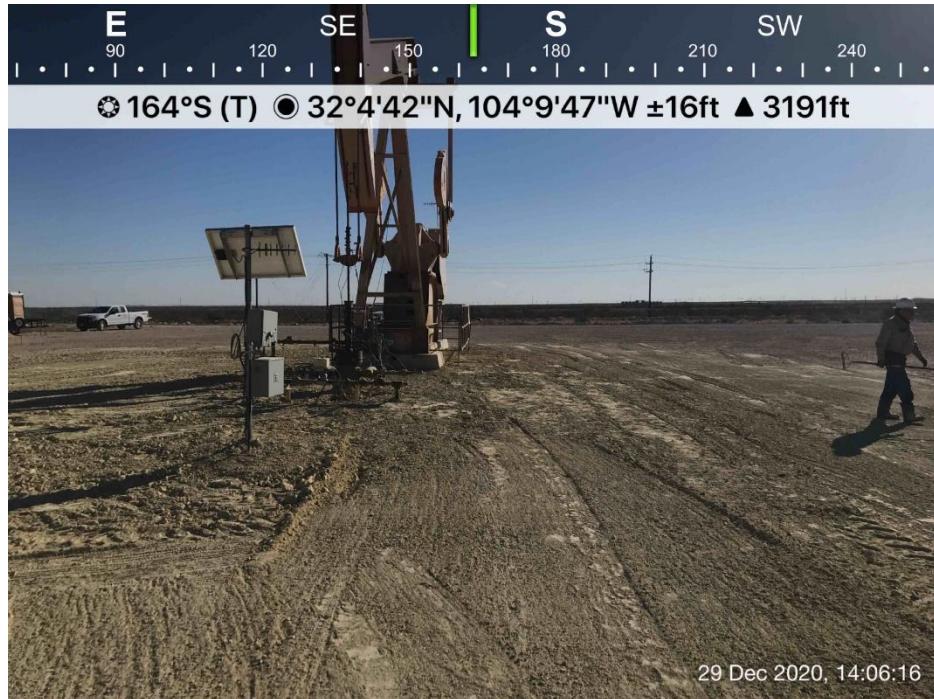


Additional 1 foot excavated from C-5 viewing southwest, December 14, 2020



Excavated soil viewing south, December 14, 2020

nRM2004350563  
Closure Report  
Chevron USA, Inc., Skeen 2H Pumping Unit  
Produced Water Release  
December 29, 2020



Backfilled excavation viewing south, December 29, 2020



Backfilled excavation viewing south, December 29, 2020

nRM2004350563  
Closure Report  
Chevron USA, Inc., Skeen 2H Pumping Unit  
Produced Water Release  
December 29, 2020



Backfilled Excavation viewing west, December 29, 2020



Backfilled excavation viewing north, December 29, 2020