# **Remediation Closure Report**

July 22, 2019

#### Oilfield Water Logistics SWD Operating, LLC Produced Water Release Bert Madera Saltwater Disposal Facility Unit Letter M and N, Section 15, T24S, R34E, Lea County, New Mexico Case No. 1RP-5498

**Prepared For:** 

Mr. Phillip Sanders Oilfield Water Logistics SWD Operating, LLC 8201 Preston Road, Suite 520 Dallas, Texas 75225

New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division Mr. Dylan Rose-Coss 1220 South Saint Francis Drive Santa Fe, New Mexico 87505

Prepared By:



500 Moseley Road Cross Roads, Texas 76227 (940) 387-0805 Phone (940) 387-0830 Fax



July 22, 2019

Mr. Phillip Sanders Oilfield Water Logistics SWD Operating, LLC 8201 Preston Road, Suite 520 Dallas, Texas 75225

#### *RE: R*emediation Closure Report: Oilfield Water Logistics (OWL) SWD Operating, LLC, Bert Madera Saltwater Disposal (SWD) Facility, Unit Letter M and N, Section 15, T24S, R34E, Lea County, New Mexico – Case No. 1RP-5498

Dear Mr. Sanders:

KJ Environmental Mgt., Inc. (KJE) is pleased to submit this Delineation and Remediation Report for the produced water release located at the Bert Madera SWD facility in Lea County, New Mexico. This report discusses background information, assessment purpose and scope of work, execution of work, and documents the corresponding results.

We appreciate your selection of KJE for this project and look forward to assisting you further on other projects. If you have any questions, please do not hesitate to contact either of the undersigned at 940-387-0805. Thank you for the opportunity to provide professional environmental consulting services. It has been a pleasure working with you.

Best Regards,

Willia- Soduto

William B. Soderstrom Environmental Project Manager

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Dena M. Vandenberg, REM, LEED AP Director of Environmental Services

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#### **Executive Summary**

KJ Environmental Mgt., Inc. (KJE), was retained by Oilfield Water Logistics (OWL) SWD Operating, LLC to complete certain delineation and remediation activities for a produced water release at the Bert Madera SWD facility in Lea County, New Mexico.

On May 11, 2019, KJE was notified by Mr. Phillip Sanders, Safety Director with OWL SWD Operating, LLC, regarding a release of produced water at the above referenced location. Following the New Mexico Oil Conservation Division (NMOCD), part of the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) notification and approval, the release was assigned a remediation case number, 1RP-5498, and delineation and remediation activities commenced.

On June 13, 2019, KJE oversaw excavation activities, performed by A&R Construction, to a total depth of two (2) feet bgs. In addition, KJE collected six (6) confirmation soil samples from the floor of the excavation (CS-01-F 2' through CS-06-F 2') and two (2) confirmation soil samples from the sidewalls (CS-07-SW 1' and CS-08-SW 1') to delineate the release horizontally and vertically. However, it should be noted the excavation is abutted to the northwest and south by two (2) separate OWL pipelines. Pursuant to OWL guidelines, a minimum 10-foot setback, on both sides of the pipeline, is required to maintain structural integrity and safety concerns.

Based on laboratory results, soil sample CS-02-F 2' was detected at a chloride concentration of 2,650 mg/kg; which is above the New Mexico Administrative Code (NMAC) closure criteria of 600 mg/kg. The remaining soil samples were either below the NMAC closure criteria or below laboratory reporting limits (non-detect).

On June 18, 2019, KJE returned to the Bert Madera SWD facility in order to complete remediation activities pursuant to NMOCD regulations. KJE oversaw additional excavation activities performed by A&R Construction to an area of 10 feet in diameter and a total depth of four (4) feet bgs surrounding CS-02-F 2'. Upon completion of excavation activities, KJE collected one (1) soil sample (BM-02 4') and submitted laboratory analysis of chlorides.

Based on analytical results, soil sample BM-02 4' was detected at a chloride concentration of 1,240 mg/kg. However, based on the known depth to groundwater within 0.5 miles of the site (>100 feet), the NMAC closure criteria for chloride is 20,000 mg/kg.

Based on previous remediation activities, required setbacks from OWL pipelines, the presence of an active O&G well (Marathon Oil), confirmation sample analytical results, and known depth to groundwater (>100 feet bgs), KJE requests NMOCD approval to begin backfilling activities of the open excavation and the remaining impacted soil above or within the 10-foot setback be deferred to a later date until equipment and/or pipelines are removed, plugged, or abandoned; whichever occurs first.

OWL SWD Operating, LLC Case No. 1RP-5498



#### 1.0 Introduction

On May 11, 2019, KJE was provided notification by Mr. Phillip Sanders, Safety Director with OWL SWD Operating, LLC, regarding a release of produced water at the Bert Madera SWD facility located approximately 18 miles northwest of Jal, New Mexico. According to OWL personnel, the de-sander caught on fire resulting in an explosion and the release of produced water. KJE notified the NMOCD of the spill on May 11, 2019, and it was determined approximately 40 barrels (BBLs) of produced water was released during the spill event. KJE submitted Form C-141 to the NMOCD on May 17, 2019 for review. A response was received from Mr. Dylan Rose-Coss, with the NMOCD, indicating the incident was assigned remediation case number 1RP-5498. Based on conversations with Mr. James Amos, with the Bureau of Land Management (BLM), the Bert Madera SWD facility is privately owned and no federal ownership, either surface or subsurface, is present on-site. The general view of the spill is illustrated in Appendix A on Figure 1.

Per the release of New Mexico Administrative Code (NMAC) 19.15.29 on August 8, 2018, KJE arrived on-site May 13, 2019, to begin remediation and closure procedures. The NMOCD approved C-141 form is located in Appendix F of this report.

#### **2.0 Environmental Assessment Activities**

#### **2.1 Delineation Activities**

On May 13, 2019, KJE personnel were on-site to visually assess and collect Global Positioning System (GPS) coordinates of the extent of the produced water release from the Bert Madera SWD facility. Additionally, KJE personnel did not complete a separate delineation prior to remediation activities. Photo documentation of field activities is included in Appendix C.

#### **2.2 Remediation Activities**

On June 13, 2019, KJE oversaw excavation activities, performed by A&R Construction, to a total depth of two (2) feet bgs. In addition, KJE collected six (6) confirmation soil samples from the floor of the excavation (CS-01-F 2' through CS-06-F 2') and two (2) confirmation soil samples from the sidewalls (CS-07-SW 1' and CS-08-SW 1') to confirm the effectiveness of remedial activities. However, it should be noted the excavation is abutted to the northwest and south by two (2) separate OWL saltwater pipelines. Pursuant to OWL guidelines, a minimum 10-foot setback, on both sides of the pipeline, is required to maintain structural integrity and address safety concerns. Therefore, KJE coordinated with OWL and A&R Construction to adhere to specific guidelines and visually marked the boundaries of the excavation. Subsequent to excavation activities, soil samples were collected and transferred to Xenco Laboratories (a third-party, independent, and licensed environmental laboratory in Midland, Texas) and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) via Method 8260, extended range total petroleum hydrocarbons (TPH) via Method 8015 modified, and chlorides via Method EPA 300.



Excavated soil was temporarily stockpiled east of the excavation and transported to Sundance Landfill in Eunice, New Mexico, by Tiger of the North Excavation. The waste manifests are included in Appendix D.

Based on laboratory results, soil sample CS-02-F 2' was detected at a chloride concentration of 2,650 mg/kg; which is above the NMOCD closure criteria of 600 mg/kg (if groundwater is <50 feet bgs). The remaining soil samples were either below the NMOCD closure criteria or non-detect for chlorides, BTEX and extended range TPH.

On June 18, 2019, KJE returned to the Bert Madera SWD facility in order to complete remediation activities pursuant to NMOCD regulations. KJE oversaw additional excavation activities performed by A&R Construction to an area of 10 feet in diameter and a total depth of four (4) feet bgs surrounding CS-02-F 2'. Upon completion of excavation activities, KJE collected one (1) soil sample (BM-02 4') and submitted to Xenco Laboratories in Midland, Texas, for laboratory analysis of chlorides via Method EPA 300. The laboratory analytical reports are included in Appendix E of this report.

Based on analytical results, soil sample BM-02 4' was detected at a chloride concentration of 1,240 mg/kg. However, based on the known depth to groundwater within 0.5 miles of the site (>100 feet), the NMAC closure criteria for chloride is 20,000 mg/kg. Therefore, KJE will request NMOCD approval to begin backfilling activities of the open excavation and the remaining impacted soil above or within the 10-foot setback be deferred to a later date.

#### 2.3 Deviations from the Scope

Based on NMAC 19.15.29, KJE performed delineation and remediation activities to expedite the closure process. KJE collected soil samples from the floor and sidewall of the excavation to delineate vertically and horizontally. However, it should be noted the excavation is abutted to the northwest and south by two (2) separate OWL pipelines. Pursuant to OWL guidelines, a minimum 10-foot setback, on both sides of the pipeline, is required to maintain structural integrity and safety concerns. Therefore, KJE coordinated with OWL and A&R Construction to adhere to specific guidelines and visually marked the boundaries of the excavation. Based on analytical results, chloride concentrations were above 600 mg/kg and soil was excavated to a total depth of four (4) feet bgs. The site plan and sample location and soil excavation map are included as Figure 1 and Figure 2 in Appendix A, respectively.

### 3.0 Soil/Groundwater Sample Collection/Handling Procedures

#### 3.1 Soil Samples

Soil samples were collected based on field indicators or depth of potential impact as noted above, and all samples were collected in four-ounce laboratory supplied glass containers for laboratory

OWL SWD Operating, LLC Case No. 1RP-5498



analysis. The collected soil samples were placed in laboratory-supplied containers, labeled, placed in an insulated container with ice, providing a 4°C environment for sufficient preservation until delivery to Xenco Laboratories accompanied by completed chain-of-custody. The sample collection and handling activities were conducted in accordance with USEPA Standard Operating Procedures and strict chain-of-custody protocols.

KJE collected one (1) duplicate sample for quality assurance/quality control (QA/QC) purposes. KJE requested the soil sample be put on hold at the laboratory pending initial analytical results.

The sample results were compared to the NMOCD closure applicable criteria, as detailed below and in Appendix B.

#### 3.2 Groundwater Samples

Groundwater was not encountered during excavation activities, nor was it anticipated to be encountered. According to records obtained from the New Mexico Office of the State Engineer's Office Hydrology Bureau records, the water well located closest to the release area is located approximately 0.45 miles to the southwest of the site in Section 21, Township 24S, Range 34E, labeled under POD number C03943, and has a recorded total depth of 610 feet bgs. Based on review of the New Mexico Office of the State Engineer online geographic information systems (GIS) website, the depth to water was reported at 431 feet bgs in 2017. As such, and based on analytical data, which explored soil borings to depths five (5) feet below the known areas of impact, potential groundwater impact is not anticipated. Based on the absence of shallow groundwater and lack as a known source of drinking water in the vicinity of the release source, there is no complete exposure pathway to shallow groundwater. No use of groundwater is expected following proposed site remediation. In addition, site remediation activities did not encounter groundwater due to the known depth of the groundwater at the site (>100 feet bgs). As such, KJE does not recommend further action regarding potential groundwater impact. A copy of the New Mexico well log is included in Appendix D.

#### 4.0 Summary of Analytical Results

#### 4.1 NMOCD Closure Criteria

The NMOCD required delineation of BTEX, extended range TPH, and chlorides for the release area. Published values for BTEX and TPH were obtained from the NMOCD document "New Mexico Administrative Code Title 19, Natural Resources and Wildlife, Chapter 15, Oil and Gas, Part 29, Releases, issued August 14, 2018". Horizontal and vertical delineation concentrations were determined to be 10 mg/kg benzene, 50 mg/kg BTEX, 100 mg/kg TPH and 600 mg/kg chloride based on the potential of groundwater to be located within 50 feet of the ground surface. See Figure 1 in Appendix A for soil sample locations and areas of exceedances.



#### 4.2 Soil Analytical Results

Analytical soil data did not identify concentrations of BTEX or TPH above the laboratory method detection limit. However, analytical results identified chlorides at a concentration of 2,650 mg/kg in soil sample CS-02-F 2' and 1,240 mg/kg in soil sample BM-02 4'; which is above the NMOCD closure criteria of 600 mg/kg (if groundwater is <50 feet bgs). However, based on the known depth to groundwater within 0.5 miles of the site (>100 feet), the NMAC closure criteria for chloride is 20,000 mg/kg.

Additionally, based on a review of waste manifests received from OWL, it was determined approximately 303 yds<sup>3</sup> of impacted soil was excavated and disposed of at Sundance Landfill in Eunice, New Mexico.

Analytical summary tables of the results are included in Appendix B, copies of the laboratory analytical reports with chain-of-custody forms are included in Appendix E, and copies of the waste manifests are included in Appendix E.

#### 5.0 Photographs

Photo documentation of the excavation and sampling activities are included in Appendix C.

#### 6.0 Conclusions/Recommendations

Based on laboratory analytical data, chloride was reported at concentrations above applicable NMOCD closure criteria in confirmation samples CS-02-F 2' and BM-02 4'. While some areas of impact remain within the pipeline easements and setback areas, KJE does not believe there to be an impact to wildlife, surface water, groundwater (>100 feet bgs), or imminent risk to human health. However, deferral areas are anticipated to remain within the pipeline easements and setback areas. Additionally, remediation activities can be continued once equipment and/or pipelines are removed, plugged, or abandoned; whichever occurs first.

Based on previous remediation activities, required setbacks from OWL pipelines, the presence of an active O&G well (Marathon Oil), confirmation sample analytical results, and known depth to groundwater (>100 feet bgs), KJE requests NMOCD approval to begin backfilling activities of the open excavation and the remaining impacted soil above or within the 10-foot setback be deferred to a later date until equipment and/or pipelines are removed, plugged, or abandoned; whichever occurs first.

OWL SWD Operating, LLC Case No. 1RP-5498



If we can be of further assistance, please do not hesitate to contact us at 940-387-0805. Thank you for the opportunity to provide professional environmental consulting services. It has been a pleasure working with you.

#### 7.0 Qualifications of Environmental Professional

This is to certify the remediation activities completed at the site located on the Bert Madera SWD facility in Lea County, New Mexico; was performed following EPA, NMOCD, and industry-approved standards/protocols. This work was conducted between May 13 and June 18, 2019, for OWL SWD Operating, LLC, and all field activities were completed under the supervision of Mr. William B. Soderstrom. Mr. Soderstrom's credentials are included in Appendix H.

#### 8.0 Signature of Environmental Professional

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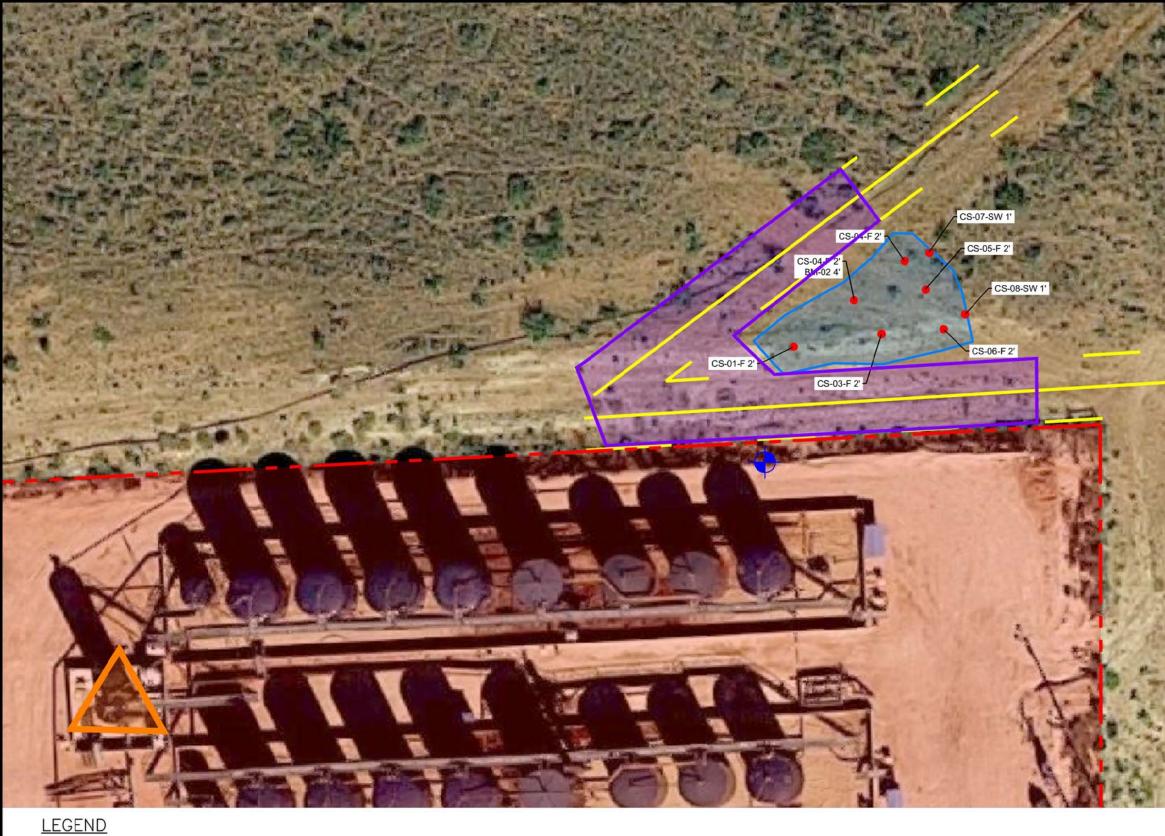
07/22/2019

William B. Soderstrom Environmental Professional Environmental Project Manager Date

# APPENDIX A

Figures

					REVISIONS:
					500 Moseley Road Cross Roads, TX 76227 Phone (940) 387-0805 Fax (940) 387-0830
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					LD WATER LOGISTICS SWD OPERATING, BERT MADERA SWD IRP-5498 v 32.21218, W -103.46187 NEV
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LEGEND					date: 7/10/2019
	SWD BOUNDARY (APPROXIMATE) MARATHON OIL WELL PAD (APPROXIMATE)				FIGURE:
	PERIMETER OF EXCAVATION		SCALE: 1" = 120'	U	1
	OWL PIPELINE (WITH 10' SETBACK)	NOTES: 1. GOOGLE EAR	TH MAPS WAS USED AS AN UNDERLAY IMAGE FOR THIS MAI	P. (http://www.google.com/earth)	'





SWD BOUNDARY (APPROXIMATE)

MARATHON OIL WELL PAD (APPROXIMATE)

PERIMETER OF EXCAVATION

RELEASE POINT



PROPOSED DEFERRAL AREA CONFIRMATION SOIL SAMPLES

SPILL ENTRANCE

OWL PIPELINE (WITH 10' SETBACK)

NOTES: 1. GOOGLE EARTH MAPS WAS USED AS AN UNDERLAY IMAGE

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SCALE: 1" = 30'

15

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	THIS DRAWING IS TO BE USED FOR PERMIT INFORMATION PURPOSES ONLY.
	500 Moseley Road Cross Roads, TX 76227 Phone (940) 387-0805 Fax (940) 387-0830
	CAVATION MAP OPERATING, LLC D 46187 NEW MEXICO
	SAMPLE LOCATION & SOIL EXCAVATION MAP OILFIELD WATER LOGISTICS SWD OPERATING, LLC BERT MADERA SWD IRP-5498 N 32.21218, W -103.46187 NEW MEX
	LEA
N	date: 7/10/2019
<b>→</b> <sup>30</sup>	FIGURE:
FOR THIS MAP. (http://www.google.com/earth)	

# **APPENDIX B**

Analytical Data



### Table 1: Soil Analytical Data Bert Madera SWD 32.21212184, -103.46117581 Jal, Lea County, New Mexico

Laborato	ry Sample Designation			627723-001	627723-002	628179-001	627723-003	627723-004	627723-005	627723-006	627723-007	627723-008
Sample Designation Date Collected			NMAC Closure	CS-01-F	CS-02-F	BM-02	CS-03-F	CS-04-F	CS-05-F	CS-06-F	CS-07-SW	CS-08-SW
		Units	Units Criteria <sup>1</sup>	6/13/2019	6/13/2019	6/18/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019	6/13/2019
Sample [	Depth		Criteria	2'	2'	4'	2'	2'	2'	2'	1'	1'
Method	Analyte			2	2	4	2	2	2	2	1	I
8015	TPH <sup>2</sup>	mg/kg	100	<15.6	<15.7		<15.7	<15.7	<16.2	<15.8	<16.2	<15.8
	BENZENE	mg/kg	10	< 0.00104	<0.00106		<0.00105	<0.00104	<0.00108	<0.00106	<0.00107	<0.00105
	ETHYLBENZENE	mg/kg		<0.00104	<0.00106		<0.00105	<0.00104	<0.00108	<0.00106	<0.00107	<0.00105
8260	TOLUENE	mg/kg		< 0.00104	<0.00106		<0.00105	<0.00104	<0.00108	<0.00106	<0.00107	<0.00105
	XYLENE	mg/kg		<0.00104	<0.00106		<0.00105	<0.00104	<0.00108	<0.00106	<0.00107	<0.00105
	TOTAL BTEX <sup>3</sup>	mg/kg	50	<0.00104	<0.00106		<0.00105	<0.00104	<0.00108	<0.00106	<0.00107	<0.00105
300	CHLORIDE	mg/kg	600	300	2,650	1,240	<5.26	<5.22	<5.46	<5.22	<5.41	<5.33

Notes:

1) New Mexico Administrative Code (NMAC) Title 19, Chapter 15, Part 29, Table 1 Closure Criteria for Soils Impacted by a Release, issued August 8, 2018

2) TPH = Total petroleum hydrocarbons

3) BTEX = Benzene, toluene, ethylbenzene, and xylenes

mg/kg = milligrams per killogram

Bold = Analyte was detected at concentrations above laboratory sample detection limits

Highlighted = Analyte was detected at concentrations above NMAC Closure Criteria

"--" = Not applicable



#### Table 2: GPS Coordiantes Bert Madera SWD 32.21212184. -103.46117581 Jal, Lea County, New Mexico

	Sal, Lea County, New		
1	Description	L = Ctural =	1
Location	Description	Latitude	Longitude
CS1	Confirmation Sample	32.21229	-103.46185
CS2	Confirmation Sample	32.21230	-103.46180
CS3	Confirmation Sample	32.21228	-103.46176
CS4	Confirmation Sample	32.21235	-103.46171
CS5	Confirmation Sample	32.21232	-103.46171
CS6	Confirmation Sample	32.21229	-103.46171
CS7	Confirmation Sample	32.21236	-103.46167
CS8	Confirmation Sample	32.21230	-103.46166
P1M	Perimeter of excavation	32.21226	-103.46185
P2M	Perimeter of excavation	32.21227	-103.46180
P3M	Perimeter of excavation	32.21227	-103.46175
P4M	Perimeter of excavation	32.21228	-103.46169
P5M	Perimeter of excavation	32.21229	-103.46166
P6M	Perimeter of excavation	32.21233	-103.46167
P7M	Perimeter of excavation	32.21235	-103.46168
P8M	Perimeter of excavation	32.21238	-103.46172
P9M	Perimeter of excavation	32.21238	-103.46174
P10M	Perimeter of excavation	32.21236	-103.46176
P11M	Perimeter of excavation	32.21234	-103.46179
P12M	Perimeter of excavation	32.21231	-103.46185
P13M	Perimeter of excavation	32.21229	-103.46188
P14M	Perimeter of excavation	32.21227	-103.46186
PL1	Pipeline	32.21226	-103.46136
PL2	Pipeline	32.21226	-103.46149
PL3	Pipeline	32.21225	-103.46159
PL4	Pipeline	32.21225	-103.46166
PL5	Pipeline	32.21224	-103.46174
PL6	Pipeline	32.21223	-103.46185
PL7	Pipeline	32.21223	-103.46195
PL8	Pipeline	32.21222	-103.46205
PL9	Pipeline	32.21223	-103.46216
PL10	Pipeline	32.21250	-103.46164
PL11	Pipeline	32.21245	-103.46172
PL12	Pipeline	32.21240	-103.46178
PL13	Pipeline	32.21235	-103.46186
PL14	Pipeline	32.21230	-103.46195
PL15	Pipeline	32.21224	-103.46204
SE	Spill Entrance (from Bert Madera SWD)	32.21218	-103.46187

Notes:

GPS coordinates were collected on June 13, 2019, by Mr. William B. Soderstrom utilizing Garmin GPSMAP 64sc unit ID 3951309141.

# APPENDIX C

**Deferral Request** 



July 22, 2019

New Mexico, Energy Minerals and Natural Resources (EMNRD) Oil Conservation Division (OCD) Mr. Dylan Rose-Coss 1220 South Francis Street Santa Fe, New Mexico 87505

#### *Re:* Remediation Deferral Due to Possible Reduction of Pipeline Structural Integrity Bert Madera SWD, Unit Letter N and M, Section 15, T24S, R34E Lea County, New Mexico – Case No. 1RP – 5498

Dear Mr. Rose-Coss:

Oilfield Water Logistics (OWL) SWD Operating, LLC and KJE respectfully requests deferral of the OCD requirements to complete further investigations and remediation for Case No. 1RP-5498. The impacted soil is adjacent to, or below one of two OWL produced water pipelines and within the respective setback area. The proposed deferral area is included on Figure 2 in Appendix A. OWL and KJE request that remediation be delayed until the pipelines are removed, plugged, or abandoned; whichever occurs first, to prevent possible damage to, or reduction of the pipelines structural integrity which could cause additional spills or releases. When the pipelines are removed, plugged, or abandoned in the future, OWL will contact NMOCD to discuss required investigations, or remediation which may or may not be required at that time.

If we can be of further assistance, please do not hesitate to contact us at 940-387-0805. We look forward to receiving comments in order to proceed with the project and closure.

Sincerely,

Willia Sodiali

William B. Soderstrom Environmental Project Manager

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Dena M. Vandenberg, REM, LEED AP Director of Environmental Services

# APPENDIX D

Photographic Documentation

#### **Site Photographs**



1. View of Bert Madera SWD facility, facing southwest.



2. View of desiccated soil in low depression north of SWD facility, facing south.



3. View of desiccated soil above OWL saltwater pipeline, facing east.



4. View of stockpiled soil and caliche during initial excavation activities followed by Marathon Oil well pad, facing east.



5. View of stockpiled soil and caliche during initial excavation activities, facing east.



6. View of over-excavation and caliche on CS-02-F 2' and BM-02 4', facing east.



## **APPENDIX E**

Waste Manifests

Business: (575) 394-2511 · Disposal: (575) 390-7842	TICKET No. 513582
EASE OPERATOR/SHIPPER/COMPANY:	DATE: 6-13-19
EASE NAME: Madera Sura	TIME: (2:57 AM/PM)
RIG NAME & NUMBER:	VEHICLE NO: 867
TRANSPORTER COMPANY: TIGER OF The North	PHONE:
GENERATOR COMPANY MAN'S NAME: Jose Cerrillo	PHONE:
CHARGETO: OWL	
TYPE OF L'I Mill bottoms L'I brinning reade	Rinsate [ ] BS&W Content: Jet Out
Description:	
VOLUME OF []BBLS: XARD_12	_: []
RRC or API # C-1	33# (1941.
PU-# 1227 HEREWITH IS MATERIAL EXEMPT FROM THE RE	AND WARRANTS THAT THE WASTE MATERIAL SHIPPED Source, conservation and recovery act of 1976, § 6901, et seq., the NM health and SAF. Code § Thereto, by virtue of the exemption afforded
DEVELOPMENT OR PRODUCTION OF CRUDE OIL Also as a condition to sundance services This job ticket. Transporter represents By operator/shipper to transporter is	OTHER WASTE ASSOCIATED WITH THE EXPLORATION,
DRILLING FLUIDS, PRODUCED WATERS, AND Development or production of crude oil Also as a condition to sundance services This job ticket. Transporter represents	OTHER WASTE ASSOCIATED WITH THE EXPLORATION, OR NATURAL GAS OR GEOTHERMAL ENERGY. INC'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH AND WARRANTS THAT ONLY THE MATERIAL DELIVERED NOW DELIVERED BY TRANSPORTER TO SUNDANCE d by this Transporter Statement at the per. This will certify that no additional
DRILLING FLUIDS, PRODUCED WATERS, AND O DEVELOPMENT OR PRODUCTION OF CRUDE OIL ALSO AS A CONDITION TO SUNDANCE SERVICES THIS JOB TICKET. TRANSPORTER REPRESENTS BY OPERATOR/SHIPPER TO TRANSPORTER IS SERVICES, INC'S FACILITY FOR DISPOSAL. THIS WILL CERTIFY that the above Transporter loaded the material represente above described location, and that it was tendered by the above described shipp materials were added to this load, and that the material was delivered without in DRIVER:	OTHER WASTE ASSOCIATED WITH THE EXPLORATION, OR NATURAL GAS OR GEOTHERMAL ENERGY. INC'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH AND WARRANTS THAT ONLY THE MATERIAL DELIVERED NOW DELIVERED BY TRANSPORTER TO SUNDANCE d by this Transporter Statement at the per. This will certify that no additional
DRILLING FLUIDS, PRODUCED WATERS, AND DEVELOPMENT OR PRODUCTION OF CRUDE OIL ALSO AS A CONDITION TO SUNDANCE SERVICES THIS JOB TICKET. TRANSPORTER REPRESENTS BY OPERATOR/SHIPPER TO TRANSPORTER IS SERVICES, INC'S FACILITY FOR DISPOSAL. THIS WILL CERTIFY that the above Transporter loaded the material represente above described location, and that it was tendered by the above described shipp materials were added to this load, and that the material was delivered without in	OTHER WASTE ASSOCIATED WITH THE EXPLORATION, OR NATURAL GAS OR GEOTHERMAL ENERGY. INC'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH AND WARRANTS THAT ONLY THE MATERIAL DELIVERED NOW DELIVERED BY TRANSPORTER TO SUNDANCE d by this Transporter Statement at the per. This will certify that no additional

	ss: (575) 394-2511 • Disp	1	DATE: 6-13-19
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TRANSPORTER COMPA	1.751		PHONE:
		ose Cervillo	
CHARGE TO:	w.		
TYPE OF	[ ] Tank Bottoms	[ ] Drilling Fluids [	] Rinsate [] BS&W Content:
MATERIAL	[] Solids	Contaminated Soil	] Jet Out
Description:	0	d,	
VOLUME OF	[] BBLS	: 11 YARD 12	: []
MATERIAL	[ ] BBLS		
RRC or API #		C.	-133# (PC1.
and the second se	S, NUMBERS, ETC.	JOB TICKET, OPERATOR/SHIPPER REPRESEN Herewith is material exempt from the	TS AND WARRANTS THAT THE WASTE MATERIAL SHIP Resource, conservation and recovery ACT of 19
po # 42 HIS WILL CERTIFY to bove described location	that the above Transpo on, and that it was ter	JOB TICKET, OPERATOR/SHIPPER REPRESEN HEREWITH IS MATERIAL EXEMPT FROM THE AS AMENDED FROM TIME TO TIME, 40 U.S 361.001 et seq., AND REGULATIONS RELAT DRILLING FLUIDS, PRODUCED WATERS, AN DEVELOPMENT OR PRODUCTION OF CRUDE ALSO AS A CONDITION TO SUNDANCE SERVIN THIS JOB TICKET. TRANSPORTER REPRESEN BY OPERATOR/SHIPPER TO TRANSPORTER SERVICES, INC.'S FACILITY FOR DISPOSAL.	IC:'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH T TS AND WARRANTS THAT THE WASTE MATERIAL SHIPP RESOURCE, CONSERVATION AND RECOVERY ACT OF 19 S.C. § 6901, et seq., THE NM HEALTH AND SAF. COD 'ED THERETO, BY VIRTUE OF THE EXEMPTION AFFOR ID OTHER WASTE ASSOCIATED WITH THE EXPLORAT OIL OR NATURAL GAS OR GEOTHERMAL ENERGY. CES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED V TS AND WARRANTS THAT ONLY THE MATERIAL DELIVE R IS NOW DELIVERED BY TRANSPORTER TO SUND/ A ted by this Transporter Statement at ipper. This will certify that no addition
PS#442 THIS WILL CERTIFY to bove described location baterials were added to	that the above Transpo on, and that it was ter	JOB TICKET, OPERATOR/SHIPPER REPRESEN HEREWITH IS MATERIAL EXEMPT FROM THE AS AMENDED FROM TIME TO TIME, 40 U.S 361.001 et seq., AND REGULATIONS RELAT DRILLING FLUIDS, PRODUCED WATERS, AN DEVELOPMENT OR PRODUCTION OF CRUDE ALSO AS A CONDITION TO SUNDANCE SERVIN THIS JOB TICKET. TRANSPORTER REPRESEN BY OPERATOR/SHIPPER TO TRANSPORTER SERVICES, INC'S FACILITY FOR DISPOSAL.	TS AND WARRANTS THAT THE WASTE MATERIAL SHIP RESOURCE, CONSERVATION AND RECOVERY ACT OF 19 S.C. § 6901, et seq., THE NM HEALTH AND SAF. COD TED THERETO, BY VIRTUE OF THE EXEMPTION AFFOR ID OTHER WASTE ASSOCIATED WITH THE EXPLORAT OIL OR NATURAL GAS OR GEOTHERMAL ENERGY. CES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED W TS AND WARRANTS THAT ONLY THE MATERIAL DELIVI A IS NOW DELIVERED BY TRANSPORTER TO SUND. The by this Transporter Statement at Supper. This will certify that no addition
po # 42 HIS WILL CERTIFY to bove described location	that the above Transpo on, and that it was ter	JOB TICKET, OPERATOR/SHIPPER REPRESEN HEREWITH IS MATERIAL EXEMPT FROM THE AS AMENDED FROM TIME TO TIME, 40 U.S 361.001 et seq., AND REGULATIONS RELAT DRILLING FLUIDS, PRODUCED WATERS, AN DEVELOPMENT OR PRODUCTION OF CRUDE ALSO AS A CONDITION TO SUNDANCE SERVIN THIS JOB TICKET. TRANSPORTER REPRESEN BY OPERATOR/SHIPPER TO TRANSPORTER SERVICES, INC.'S FACILITY FOR DISPOSAL.	TS AND WARRANTS THAT THE WASTE MATERIAL SHIP RESOURCE, CONSERVATION AND RECOVERY ACT OF 19 S.C. § 6901, et seq., THE NM HEALTH AND SAF. COL ED THERETO, BY VIRTUE OF THE EXEMPTION AFFOR ID OTHER WASTE ASSOCIATED WITH THE EXPLORAT OIL OR NATURAL GAS OR GEOTHERMAL ENERGY. CES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED IN TS AND WARRANTS THAT ONLY THE MATERIAL DELIV R IS NOW DELIVERED BY TRANSPORTER TO SUND Inted by this Transporter Statement at Sipper. This will certify that no addition
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LEASE OPERATOR/SHIPPER/COMPANY: OWC	DATE:	29078
LEASE NAME: Madera Sur	TIME:/	22 AM/F
RIG NAME & NUMBER:	VEHICLI	
TRANSPORTER COMPANY: TIGER OF	the with PHONE:	
GENERATOR COMPANY MAN'S NAME:	e CONTILO PHONE:	
CHARGE TO: ONC		
TYPE OF [] Tank Bottoms []	Drilling Fluids [] Rinsate []	BS&W Conte
MATERIAL [] Solids	Contaminated Soil [ ] Jet Out	
Description:	ch	
VOLUME OF []BBLS:	KI YARD_12_: [	]
RRC or API #	C-133# (:ea	
DEVEL Also A This Jo By Op	ING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATI Opment or production of crude oil or natural gas or geo as a condition to sundance services, inc.'s acceptance of th ob ticket. Transporter represents and warrants that on perator/shipper to transporter is now delivered by th ces, inc.'s facility for disposal.	THERMAL ENERGY. IE MATERIALS SHIPP Ly the material of
<b>HIS WILL CERTIFY</b> that the above Transporter load bove described location, and that it was tendered by aterials were added to this load, and that the mater	ded the material represented by this Transpor y the above described shipper. This will certifi	ter Statement y that no addi
DRIVER: Callos Mey.a		
(SIGNATURE)	K	
	2	
(SIGNATURE)	Lanna .	
(SIGNATURE)	Sundance Acct #1 Pink - Transpor	ter
• (SIGNATURE) White - Sundance Canary -	Sundance Acct #1 Pink - Transpor	ter

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LEASE OPERATOR/SHI	PPER/COMPANY:		DATE: 6-14-19.
		-1D -	TIME: 11:00 AM/PM
RIG NAME & NUMBER	the second s		VEHICLE NO: 867
TRANSPORTER COMP	ANY: TIGEY	of the worth. PH	ONE:
GENERATOR COMPAN	Y MAN'S NAME:	OSE CENTILO PH	ONE:
CHARGE TO:	Jul		
TYPE OF	[] Tank Bottoms	[ ] Drilling Fluids [ ] Rinsa	te [] BS&W Content:
MATERIAL	[] Solids	Contaminated Soil [] Jet O	ut
Description:		(1)	
VOLUME OF MATERIAL	[]BBLS	_: KTYARD_12:	[]
RRC or API #		C-133#	(+a.
P0 #	S, NUMBERS, ETC.	JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WAF HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, 361.001 et seq., AND REGULATIONS RELATED THERETO DRILLING FLUIDS, PRODUCED WATERS, AND OTHER W DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATU	CONSERVATION AND RECOVERY ACT OF 19 et seq., THE NM HEALTH AND SAF. CODE I, by virtue of the exemption afford ASTE ASSOCIATED WITH THE EXPLORATIO
		ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S A This Job Ticket. Transporter represents and waf by Operator/Shipper to Transporter is now d Services, Inc.'s Facility for Disposal.	CCEPTANCE OF THE MATERIALS SHIPPED WI Irants that only the material deliver
	that the above Transp	orter loaded the material represented by the	is will certify that no addition
ove described location	on, and that it was ten	ne material was delivered without incident	
ove described location aterials were added to DRIVER:	on, and that it was ten		
ove described location aterials were added to MM	on, and that it was ten o this load, and that th		

Disposal: (5/5) 390-7842	ET No. 513595					
LEASE OPERATOR/SHIPPER/COMPANY:	DATE: 613.19					
LEASE NAME: MUDERCI Supp	TIME: AM/PM					
RIG NAME & NUMBER:	VEHICLE NO:					
TRANSPORTER COMPANY: JUGAR Of 110 Marth PHO	DNE:					
GENERATOR COMPANY MAN'S NAME:						
CHARGE TO: OWL						
TYPE OF MATERIAL       [] Tank Bottoms       [] Drilling Fluids       [] Rinsate         Description:       [] Solids       [] Contaminated Soil       [] Jet Out	[ ] BS&W Content:					
VOLUME OF MATERIAL : : : : : : : : : : : : : : : : : : :	[]					
RRC or API # C-133#						
STICKERS, CODES, NUMBERS, ETC.         AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.         ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE						
<b>THIS WILL CERTIFY</b> that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.						
FACILITY REPRESENTATIVE:						
(SIGNATURE)						
White - Sundance Canary - Sundance Acct #1 Pink - Trans	porter					
Reorder from: Vertigo Creative Services LLC • www.VertigoCreative.com • Form#SDI-004b						

			and the second se			
SUNDANCE SERVICES, Inc. P.O. Box 1737 Eunice, New Mexico 88231 Business: (575) 394-2511 • Disposal: (575) 390-7842						
	SHIPPER/COMPANY:	OWL	DATE: 6-14-19			
LEASE NAME:	madera	Sup	TIME: AM/PM			
RIG NAME & NUMB			VEHICLE NO:			
TRANSPORTER COMPANY: TIGER OF THE MONTH PHONE:						
GENERATOR COMPANY MAN'S NAME:						
CHARGE TO:	owl					
TYPE OF	[ ] Tank Bottoms	[] Drilling Fluids [] Rinsa	ite [] BS&W Content:			
MATERIAL	[ ] Solids	[ ] Contaminated Soil [ ] Jet O	i i boaw content.			
Description:		on				
VOLUME OF MATERIAL	[ ] BBLS	: [X] YARD:	[]			
RRC or API #		C-133#	(+9.			
STICKERS, CODES, NUMBERS, ETC.         AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.         ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE						
THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.         DRIVER:						
Wh	ite - Sundance	Canary Sundance And Int				
			ansporter			
	Reorder from: Vertigo Creativ	e Services LLC • www.VertigoCreative.com • Form#SDI-(	004b			

SUNDANCE SERVICES, Inc. P.O. Box 1737 Eunice, New Mexico 88231 Business: (575) 394-2511 • Disposal: (575) 390-7842	ET No. 513703
LEASE OPERATOR/SHIPPER/COMPANY:	DATE: 6-14-19
LEASE NAME:	TIME: AM/PM
RIG NAME & NUMBER:	VEHICLE NO: 0 2
	DNE:
GENERATOR COMPANY MAN'S NAME: PHO	DNE:
CHARGE TO: OUL	
TYPE OF       [] Tank Bottoms       [] Drilling Fluids       [] Rinsate         MATERIAL       [] Solids       [] Contrained of the set of t	[] BS&W Content:
Contaminated Soil [] Jet Out	
Description:	
VOLUME OF [] BBLS: [/] YARD:	[]
RRC or API # C-133#	+ q.
STICKERS, CODES, NUMBERS, ETC.AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANT HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONS AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq 361.001 et seq., AND REGULATIONS RELATED THERETO, BY N DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL G/ 	S THAT THE WASTE MATERIAL SHIPPED ERVATION AND RECOVERY ACT OF 1976, q., THE NM HEALTH AND SAF. CODE § VIRTUE OF THE EXEMPTION AFFORDED ASSOCIATED WITH THE EXPLORATION, AS OR GEOTHERMAL ENERGY. INCE OF THE MATERIALS SHIPPED WITH THAT ONLY THE MATERIAL DELIVERED
<b>THIS WILL CERTIFY</b> that the above Transporter loaded the material represented by this Tra above described location, and that it was tendered by the above described shipper. This will materials were added to this load, and that the material was delivered without incident. DRIVER:	insporter Statement at the certify that no additional
FACILITY REPRESENTATIVE:	
(SIGNATURE)	
White - Sundance Canary - Sundance Acct #1 Pink - Tran	sporter
Reorder from: Vertigo Creative Services LLC • www.VertigoCreative.com • Form#SDI-004	

SUNDANCE SERVICES, Inc. P.O. Box 1737 Eunice, New Mexico 88231 Business: (575) 394-2511 • Disposal: (575) 390-7842	TICKET No. 513685
LEASE OPERATOR/SHIPPER/COMPANY:	DATE:
LEASE NAME:	TIME: AM/PM
RIG NAME & NUMBER:	VEHICLE NO:
TRANSPORTER COMPANY:	PHONE:
GENERATOR COMPANY MAN'S NAME:	PHONE:
CHARGE TO:	
TYPE OF       [] Tank Bottoms       [] Drilling Fluids         MATERIAL       [] Solids       [] Contaminated Soil         Description:	[ ] Rinsate [ ] BS&W Content: [ ] Jet Out
VOLUME OF [] BBLS: [] YARD	: []
RRC or API #	-133#
HEREWITH IS MATERIAL EXEMPT FROM THE AS AMENDED FROM TIME TO TIME, 40 U.S 361.001 et seq., AND REGULATIONS RELAT DRILLING FLUIDS, PRODUCED WATERS, AN DEVELOPMENT OR PRODUCTION OF CRUDE O ALSO AS A CONDITION TO SUNDANCE SERVIC THIS JOB TICKET. TRANSPORTER REPRESENT	IC'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS TS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, .C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § ED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED D OTHER WASTE ASSOCIATED WITH THE EXPLORATION, IL OR NATURAL GAS OR GEOTHERMAL ENERGY. ES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH S AND WARRANTS THAT ONLY THE MATERIAL DELIVERED IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE
THIS WILL CERTIFY that the above Transporter loaded the material represent above described location, and that it was tendered by the above described ship materials were added to this load, and that the material was delivered without it DRIVER: (SIGNATURE) FACILITY REPRESENTATIVE: (SIGNATURE)	per This will cortify that no additional
White - Sundance Canary - Sundance Acct #1	Pink - Transporter
Reorder from: Vertigo Creative Services LLC • www.VertigoCreative.com	• Form#SDI-004b

SUNDANCE SERVICES, Inc. P.O. Box 1737 Eunice, New Mexico 88231 Business: (575) 394-2511 • Disposal: (575) 390-7842	ET No. 513686
LEASE OPERATOR/SHIPPER/COMPANY:	DATE:
LEASE NAME: MOULERCE SOOD	
RIG NAME & NUMBER:	VEHICLE NO:
TRANSPORTER COMPANY: PHO	061
GENERATOR COMPANY MAN'S NAME: PHO	
CHARGE TO:	
TYPE OF MATERIAL       [] Tank Bottoms       [] Drilling Fluids       [] Rinsate         [] Solids       [] Contaminated Soil       [] Jet Out         Description:	[ ] BS&W Content:
VOLUME OF []BBLS: YARD:	[]
RRC or API # C-133#	
AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE O JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSE AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VI DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE A DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTAN THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS I BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERE SERVICES, INC.'S FACILITY FOR DISPOSAL.	THAT THE WASTE MATERIAL SHIPPED RVATION AND RECOVERY ACT OF 1976, ., The NM HEALTH AND SAF. CODE § RTUE OF THE EXEMPTION AFFORDED SSOCIATED WITH THE EXPLORATION, S OR GEOTHERMAL ENERGY. ICE OF THE MATERIAL SHIPPED WITH THAT ONLY THE MATERIAL DELIVERED D BY TRANSPORTER TO SUNDANCE
<b>THIS WILL CERTIFY</b> that the above Transporter loaded the material represented by this Tran above described location, and that it was tendered by the above described shipper. This will a materials were added to this load, and that the material was delivered without incident.	sporter Statement at the certify that no additional
DRIVER:	
FACILITY REPRESENTATIVE:	
(SIGNATURE) White - Sundance Reorder from: Vertigo Creative Services LLC • www.VertigoCreative.com • Form#SDI-004b	porter
Form#SDI-004b	

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SUNDANCE SERVICES, Inc. P.O. Box 1737 Eunice, New Mexico 88231 Business: (575) 394-2511 • Disposal: (575) 390-7842	ET No. 510203
LEASE OPERATOR/SHIPPER/COMPANY:	DATE: 5-15-19
LEASE NAME: Madera Suptop	
RIG NAME & NUMBER:	VEHICLE NO:
TRANSPORTER COMPANY:	
GENERATOR COMPANY MAN'S NAME:	
CHARGE TO:	
TYPE OF       [] Tank Bottoms       [] Drilling Fluids       [] Rinsate	
MATERIAL [] Solids [] Contaminated Soil [] Jet Out	[ ] BS&W Content:
Description:	
VOLUME OF []BBLS: []YARD:	[]
RRC or API # C-133#	
STICKERS, CODES, NUMBERS, ETC.AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE O JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSET AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq. 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VII DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE AS DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS 	THAT THE WASTE MATERIAL SHIPPED RVATION AND RECOVERY ACT OF 1976, , THE NM HEALTH AND SAF. CODE & RTUE OF THE EXEMPTION AFFORDED SSOCIATED WITH THE EXPLORATION, OR GEOTHERMAL ENERGY. CE OF THE MATERIALS SHIPPED WITH HAT ONLY THE MATERIAL DELIVERED D BY TRANSPORTER TO SUNDANCE
DRIVER:	arter
FACILITY REPRESENTATIVE:	
(SIGNATURE)	
White - Sundance Canary - Sundance Acct #1 Pink - Transp	porter
Reorder from: Vertigo Creative Services LLC • www.VertigoCreative.com • Form#SDI-004b	

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	a state of the sta
II         Business: (575) 394-2511         • Disposal: (575) 390-7842	ET No. 510253
LEASE OPERATOR/SHIPPER/COMPANY:	DATE: 5-15-6
LEASE NAME: MIDERG SUP # 001	TIME: AM/PM
RIG NAME & NUMBER:	VEHICLE NO:
TRANSPORTER COMPANY: 000000000000000000000000000000000000	
GENERATOR COMPANY MAN'S NAME: PHO	NE:
CHARGE TO:	
TYPE OF [] Tank Bottoms [] Drilling Eluids [] Binast	
MATERIAL [] Solido	[ ] BS&W Content:
Description:	
VOLUME OF []BBLS: []YARD :	[]
RRC or API # C-133#	
AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE O JOB TICKERS, CODES, NUMBERS, ETC. AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE O JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSE AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VI DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE AN DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTAN THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS T BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED SERVICES, INC.'S FACILITY FOR DISPOSAL. THIS WILL CERTIFY that the above Transporter loaded the material represented by this Tran- above described location, and that it was tendered by the above described shipper. This will o materials were added to this load, and that the material was delivered without incident.	THAT THE WASTE MATERIAL SHIPPED RVATION AND RECOVERY ACT OF 1976, , THE NM HEALTH AND SAF. CODE S RTUE OF THE EXEMPTION AFFORDED SSOCIATED WITH THE EXPLORATION, FOR GEOTHERMAL ENERGY. CE OF THE MATERIALS SHIPPED WITH HAT ONLY THE MATERIAL DELIVERED D BY TRANSPORTER TO SUNDANCE
(SIGNATURE) FACILITY REPRESENTATIVE: (SIGNATURE)	
White - Sundance Canary - Sundance Acct #1 Pink - Transp	porter
Reorder from: Vertigo Creative Services LLC • www.VertigoCreative.com • Form#SDI-004b	

	and the second
Dusiness: (575) 394-2511 • Disposal: (575) 390-7842	ET No. 510260
LEASE OPERATOR/SHIPPER/COMPANY:	DATE: 5-15-19
LEASE NAME: Madeia Dup Fool	THAT
RIG NAME & NUMBER:	ANDEN
TRANSPORTER COMPANY:	VEHICLE NO:
GENERATOR COMPANY MAN'S NAME:	
CHARGE TO:	
TYPE OF MATERIAL       [] Tank Bottoms       [] Drilling Fluids       [] Rinsate         Description:       [] Solids       [] Contaminated Soil       [] Jet Out	[] BS&W Content:
VOLUME OF BBLS. : I HARD :	[]\$
RRC or API # C-133#	the second se
<b>STICKERS, CODES, NUMBERS, ETC.</b> AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE O JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSER AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq. 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIF DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE AS DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTAN THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS T BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED SERVICES, INC.'S FACILITY FOR DISPOSAL.	THAT THE WASTE MATERIAL SHIPPED WATION AND RECOVERY ACT OF 1976, THE NM HEALTH AND SAF. CODE & RTUE OF THE EXEMPTION AFFORDED SOCIATED WITH THE EXPLORATION, OR GEOTHERMAL ENERGY. CE OF THE MATERIALS SHIPPED WITH HAT ONLY THE MATERIAL DELIVERED BY TRANSPORTER TO SUNDANCE
<b>THIS WILL CERTIFY</b> that the above Transporter loaded the material represented by this Trans above described location, and that it was tendered by the above described shipper. This will compare materials were added to this load, and that the material was delivered without incident.	sporter Statement at the ertify that no additional
DRIVER:	
FACILITY REPRESENTATIVE:	
(SIGNATURE)	
White - Sundance Canary - Sundance Acct #1 Pink - Transp	orter
Reorder from: Vertigo Creative Services LLC • www.VertigoCreative.com • Form#SDI-004b	

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Disposal: (575) 390-7842	KET No. 510215
LEASE OPERATOR/SHIPPER/COMPANY:	DATE: 5-15-19
LEASE NAME: Madera SWOHOD	
RIG NAME & NUMBER:	AWI/PIVI
TRANSPORTER COMPANY: TOP OF THE NAME OF THE OFFICE OF THE NAME OF THE OFFICE OF THE OFFICE OF THE OFFICE OF THE OFFICE OF	VEHICLE NO:
GENERATOR COMPANY MAN'S NAME:	ONE:
CHARGE TO:	DNE: 969-929
TYPE OF MATERIAL       [] Tank Bottoms       [] Drilling Fluids       [] Rinsate         Description:	[ ] BS&W Content:
VOLUME OF [] BBLS. : [] YARD :	[]
RRC or API # C-133#	Y
AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSE AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq 361.001 et seq., AND REGULATIONS RELATED THERETO, BY V DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE A DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTAN THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS BY OPERATOR/SHIPPER TO TRANSPORTER I.C. NOW DELIVIOUS	THAI THE WASTE MATERIAL SHIPPED RVATION AND RECOVERY ACT OF 1976, ., The NM HEALTH AND SAF. CODE S RTUE OF THE EXEMPTION AFFORDED SSOCIATED WITH THE EXPLORATION, S OR GEOTHERMAL ENERGY. ICE OF THE MATERIALS SHIPPED WITH
<b>THIS WILL CERTIFY</b> that the above Transporter loaded the material represented by this Tran above described location, and that it was tendered by the above described shipper. This will a materials were added to this load, and that the material was delivered without incident. DRIVER:	D BY TRANSPORTER TO SUNDANCE
(SIGNATURE) FACILITY REPRESENTATIVE:	
(SIGNATURE)	
White - Sundance Canary - Sundance Acct #1 Pink - Transr	
Reorder from: Vertigo Creative Services LLC • www.VertigoCreative.com • Form#SDI-004b	porter

SUNDANCE SERVICES, Inc.	FLOODE
Business: (575) 394-2511 · Disposal: (575) 396-7842	TICKET No. 513695
1000 million	DATE: 6-111-19
LI MILLEY MA MAN	TIME: 10:08 AM/PM
RIG NAME & NUMBER:	VEHICLE NO:
TRANSPORTER COMPANY: CHIVES TWCKING.	PHONE:
GENERATOR COMPANY MAN'S NAME: 1058 CRYVIIIO	PHONE
CHARGETO: OUIC	
TYPE OF         [ ] Tank Bottoms         [ ] Drilling Fluids         [ ] Ri           MATERIAL         [ ] Solids         [/] Contaminated Soil         [ ] Je	
VOLUME OF 1 JBBLS: [JYARD_/2	: []
RRC or API # C-133	1# L+G.
A A A A A A A A A A A A A A	CCEPTIANCE OF THE MATERIALS SHIPPED WITH THIS O MARANNIS THAT THE MASTE MATERIAL SHIPPED LURCE, CONSERVATION AND RECOVERY ACT OF 1978. I BOOT, 81 Seq., THE NM HEALTH AND SAF. COUE S HERETO, BK WIRTUE OF THE EXEMPTION AFFORMED CHER MASTE ASSOCIATED WITH THE EXPLORATION. IF MATURAL GAS OR GEOTREEMAL ENERGY. D
ALSO AS A CONDITION TO SUNDANCE SERVICES, This Job Ticket. Transporter Represents A by Operator/Shipper to Transporter IS Services. Inc:S Facility for Disposal.	INCIS ACCEPTANCE OF THE MATERIALS SHIPPED WITH IS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED G NOW DELIVERED BY TRANSPORTER TO SUNDANCE T
<b>THIS WILL CERTIFY</b> that the above Transporter loaded the material represented above described location, and that it was tendered by the above described shipt materials were added to this load, and that the material was delivered without in	ed by this fransporter statement active per. This will certify that no additional ncident.
DRIVER: Calor Mains	
CIGNATURO (/	
FACILITY REPRESENTATIVE	
White - Sundance Canary - Sundance Acct #1	Pink - Transporter
Reorder from: Vertigo Creative Services LLC + www.VertigoCreative.co	om + Form#SDI-0046
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to to location and	1 19

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-	P.O. Box 1737 Eunice, New Mex Business: (575) 394-2511 • Disposa	ico 88231	KET No. 513693	
LEASE OPERA	TOR/SHIPPER/COMPANY:	1997 (	DATE: 6-14-19	-
LEASE NAME	and a second	d.	TIME: 10:05 AM/PM	
RIG NAME &			VEHICLE NO:	F, 3
TRANSPORT	ER COMPANY:	SVC. P	HONE:	
GENERATOR	COMPANY MAN'S NAME:		HONE:	F
CHARGE	TO:			
ТҮРЕ МАТЕР	OF [ ] Tank Bottoms RIAL [ ] Solids	[] Drilling Fluids     [] Rinsa       [] Contaminated Soil     [] Jet Contaminated Soil		-
I VOLUM MATE	IE OF []BBLS	: 11 YARD 12 :	[]	1-1-
RRC or		C-133#	1+9.	11
And Of	ATT#	AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCE	PTANCE OF THE MATERIALS SHIPPED WITH TH	
PO	ERS, CODES, NUMBERS, ETC. # インスフ	<ul> <li>AS A CONDITION TO SUNUANCE SERVICES, INC. 5 NO.C.</li> <li>JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WI HEREWITH IS MATERIAL EXEMPT FROM THE RESOURI AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 69 361.001 et seq., AND REGULATIONS RELATED THER DRILLING FLUIDS, PRODUCED WATERS, AND OTHE DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR I ALSO AS A CONDITION TO SUNDANCE SERVICES, INIT THIS JOB TICKET. TRANSPORTER REPRESENTS AND BY OPERATOR/SHIPPER TO TRANSPORTER IS N SERVICES, INC:S FACILITY FOR DISPOSAL.</li> </ul>	LE, CURSERVATIONAL MAD INSOLUTE AND SAF. COL (O), et seq., The NM HEALTH AND SAF. COL (ETO, BY VIRTUE OF THE EXEMPTION AFFOI RAURAL GAS OR GEOTHERMAL ENERGY. C:S ACCEPTANCE OF THE MATERIALS SHIPPE VARRANTS THAT ONLY THE MATERIAL DE OW DELIVERED BY TRANSPORTER TO SU	JE Š R ROED BD ATTON, CE ED WITH e LIVERED JJ UNDANCE JJ
above descrit materials we	re added to this load, and that the	rter loaded the material represented dered by the above described shippe e material was delivered without inc	by this Transporter Statemen er. This will certify that no ad ident.	Iditional
DRIVER	the state of the s	mmglet		
1 11	(SIGNATURE)	k.		-
PACILITY	(SIGNATURE)	8		
	Willie - Juliaanse	Canary - Sundance Acct #1	Pink - Transporter	
	Reorder from: Vertigo Creativ	ve Services LLC • www.VertigoCreative.com	0 + FOLL#201-0040	
The second	Prove to	digging	May	-20-1

	P.O. Box 1737 Eunice, New Mei iness: (575) 394-2511 • Disposi	ICES, Inc. exico 88231 al: (575) 390-7842	TICKET No. 513717
LEASE OPERATOR/S	SHIPPER/COMPANY:	26	DATE: 6-19-19
LEASE NAME:	madera S.	ib	TIME: 1. 24 AM/PM
RIG NAME & NUME	SER:		VEHICLE NO:
TRANSPORTER CO			PHONE:
GENERATOR COM	PANY MAN'S NAME:	SE CEVILLO	
CHARGE TO: TYPE OF MATERIAL	[ ] Tank Bottoms [ ] Solids	[] Contaminated Soil [	] Rinsate [ ] BS&W Content: ] Jet Out
Description:		: 0 YARD_)	: []
MATERIAL RRC or API #		C	-133# (+94:
	227	AS AMENDED FROM TIME TO TIME, 40 361.001 et seq., and regulations re drilling fluids, produced waters, development or production of CRU ALSO AS A CONDITION TO SUNDANCE SI THIS JOB TICKET. TRANSPORTER REPR BY OPERATOR/SHIPPER TO TRANSPI	ENTS AND WARRANTS THAT THE WASTE WITCHT AT OF 1976 HE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE LATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORD , AND OTHER WASTE ASSOCIATED WITH THE EXPLORATI JDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY. ERVICES, INC'S ACCEPTANCE OF THE MATERIAL SHIPPED LESENTS AND WARRANTS THAT ONLY THE MATERIAL DEL ORTER IS NOW DELIVERED BY TRANSPORTER TO SU JSAL.
		sporter loaded the material repr	resented by this Transporter Statement ad chipper. This will certify that no ad
above described i	Ided to this load, and that	t the material was delivered the	thout incident.
above described i materials were ad DRIVER:	Ided to this load, and that	t the material was delivered the	thout incident.
above described i materials were ad DRIVER:	Ided to this load, and that	t the material was delivered the	

-	=	SUNDANCE SERVICES, Inc. P.O. Box 1737 Eunice, New Mexico 88231 Rusineser (57E) 200 2010	
		SUNDANCE SERVICES, Inc.       TICKET No. 513692         P.O. Box 1737 Eunice, New Mexico 88231       Disposal: (575) 390-7842         Business: (575) 394-2511       Disposal: (575) 390-7842	
LE	A	LEASE OPERATOR/SHIPPER/COMPANY:	
L		LEASE NAME: WEHICLE NO:	
R	IG	RIG NAME & NUMBER: PHONE:	-
T	RA	TRANSPORTER COMPANY: PHONE:	178
It	SEL	GENERATOR COMPANY MAN'S NAME:	110
		TYPE OF       [] Tank Bottoms       [] Drilling Fluids       [] Kinsate       [] Solids         MATERIAL       [] Solids       [] Contaminated Soil       [] Jet Out         Description:	ate: Me
	1	I MATERIAL C-133# (PG.	
The second secon		RRC or API #         STICKERS, CODES, NUMBERS, ETC.         Mathematical Structure         AS A CONDITION TO SUNDANCE SERVICES, INC:S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS DID TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT ON AND RECOVERY ACT OF 1976, HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, HEREWITH IS MATERIAL SKEWPT FROM THE SALE ASSOCIATED WITH THE EXEMPTION AFFORDED 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED 361.001 et seq., AND REGULATION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.         DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXEMPTION AFFORDED 361.001 et seq., AND REDUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.         DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE MATERIAL SHIPPED WITH THE SEQURATION, DRILLING FLUIDS, PRODUCED WATERS, AND OWARRANTS THAT ONLY THE MATERIAL SHIPPED WITH THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL SHIPPED THIS JOB TICKET, INC:S ACCEPTANCE OF THE MATERIAL SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL SHIPPED WITH THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL SHIPPED WITH THIS JOB TICKET. TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC:S FACILITY FOR DISPOSAL.         THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL SHIPPED WITH WE M	the .
ab		above described location, and that the material water	-
mi	1	10/2 Merson	_
1	11	DRIVER:	
ł		FACILITY REPRESENTATIVE:	
		White - Sundance       Canary - Sundance Acct #1       Pink - Transporter         Reorder from: Vertigo Creative Services LLC • www.VertigoCreative.com • Form#SDI-004b	
L	_	thele own are	10

SUNDANCE PO. Box 1737	SERVICES, Inc.
SUNDANCE SERVICE P.O. Box 1737 Eunice, New Mexico 882 Business: (575) 394-2511 • Disposal: (575)	390-7842 DATE: 6 - 14 - 17
LEASE OPERATOR/SHIPPER/COMPANY: 601	TIME:/: 2 2 AM/PM         7           VEHICLE NO:         M         77
LEASE NAME: RIG NAME & NUMBER:	PHONE:
TRANSPORTER COMPANY: GENERATOR COMPANY MAN'S NAME:	PHONE: nt:
CHARGE TO:	J Drilling Fluids       [] Rinsate       [] BS&W Content:         J Contaminated Soil       [] Jet Out
Description:         VOLUME OF         MATERIAL	: 1 YARD : [] : C-133# (eq
RRC or API #	AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS DB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERAL SHIPPED AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEATH AND SAF. CODE § 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DRILLING FLUIDS, PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERSY. DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERSY. DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR THE MATERIALS SHIPPED WITH ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIAL SHIPPED WITH THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.
<b>THIS WILL CERTIFY</b> that the above Transp above described location, and that it was te materials were added to this load, and that	by OPERATORIO STRACILITY FOR DISPUSAL. SERVICES, INC'S FACILITY FOR DISPUSAL.
DRIVER: (SIGNATURE) FACILITY REPRESENTATIVE: (SIGNATURE)	B B B B B B B B B B B B B B B B B B B
White - Sundance	Creative Services LLC • www.VertigoCreative.com • Form#SDI-004b
Reorder from: Vertigo	Lelpows crew?

LEASE OPERATOR/SHIPPE		xico 88231 al: (575) 390-7842		No. 513720
LEASE NAME.		26		IME: 1.3 AM/PM
RIG NAME & NUMBER:	dera su	b		VEHICLE NO: 06
TRANSPORTER COMPANY	v. Cladent	2 Taukun		
GENERATOR COMPANY	CILIVIC	e cerrillo	PHON	
CHARGE TO:	2.21	DE LEPPINS		
CHANGE TO.	owl			
TIPEOF	[ ] Tank Bottoms	[ ] Drilling Fluids [ ] Contaminated Soil	[ ] Rinsate [ ] Jet Out	[ ] BS&W Content:
	[ ] Solids	Contaminated Soli	[] Jet Out	
Description:			10	
VOLUME OF MATERIAL	[ ] BBLS	: [/] YARD!	2_:	[]
RRC or API #			C-133#	pg.
		OCTONI OF SPIL. ANU DEDULATION	INS RELATED INCHETO,	DI VIIITOL OI THE ENERIT THE
420		DRILLING FLUIDS, PRODUCED W DEVELOPMENT OR PRODUCTION ALSO AS A CONDITION TO SUNDA THIS JOB TICKET. TRANSPORTER BY OPERATOR/SHIPPER TO TR	ATERS, AND OTHER W OF CRUDE OIL OR NATU NCE SERVICES, INC'S A REPRESENTS AND WA ANSPORTER IS NOW	BY VIRTUE OF THE EXEMPTION AFF ISTE ASSOCIATED WITH THE EXPLO RAL GAS OR GEOTHERMAL ENERGY. CCEPTANCE OF THE MATERIALS SHIT RRANTS THAT ONLY THE MATERIAL DELIVERED BY TRANSPORTER TO
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P.O. Box 1737 Eunice, New Mexic Business: (575) 394-2511 Disposal:	<b>CES, Inc.</b> 0 88231 (575) <b>390-7842</b>		No. 513608
LEASE OPERATOR/SHIPPER/COMPANY:			ATE: 6-12-19
LEASE NAME: Madera Sub			EHICLE NO: 27
RIG NAME & NUMBER:		PHON	
GENERATOR COMPANY:	NC.		E: 575 969 4
	ra-el Estracle	1	
CHARGE TO: JWL			
TYPE OF [ ] Tank Bottoms	[] Drilling Fluids	[ ] Rinsate [ ] Jet Out	[] BS&W Content
MATERIAL [] Solids	Contaminated Soil	[ ] Jerour	
Description:		7	
VOLUME OF []BBLS	: [/ YARD_/	:	[]
MATERIAL		C-133# (	+9.
RRC or API #	AS A CONDITION TO SUNDANCE SERVI Job Ticket, operator/shipper Rep		THE MATERIALS SHIPPED WI
po # 4277	JOB TICKET, OPERATOR/SHIPPER REP Herewith Is Material exempt fro As Amended from time to time,	40 0.3.6. 3 0501, 6	I SEQ., THE NM REALTS AND SH
	361.001 et seq., And Regulation Drilling Fluids, produced wat Development or production of Also as a condition to sundan This Job Ticket. Transporter F By Operator/Shipper to Tra Services, Inc's Facility for D	RELATED THERE WI CRUDE OIL OR NATU DE SERVICES, INC'S A EPRESENTS AND WA ISPORTER IS NOW SPOSAL.	ASTE ASSOCIATED WITH THE EX RAL GAS OR GEOTHERMAL ENERGY ICCEPTANCE OF THE MATERIALS IRRANTS THAT ONLY THE MATER DELIVERED BY TRANSPORTER
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above described location, and that it was tele materials were added to this load, and that the DRIVER:	361.001 et seq., AND REGULATION. DRILLING FLUIDS, PRODUCED WAT DEVELOPMENT OR PRODUCTION OF ALSO AS A CONDITION TO SUNDAN THIS JOB TICKET. TRANSPORTER F BY OPERATOR/SHIPPER TO TRA SERVICES, INC.'S FACILITY FOR D Forter loaded the material in dered by the above descu- ne material was delivered	RELATED THERE WI CRUDE OIL OR NATU CRUDE OIL OR NATU CRUDE OIL OR NATU SE SERVICES, INC'S A EPRESENTS AND WA ISPORTER IS NOW SPOSAL. epresented by ibed shipper. without incid	STE ASSOCIATED WITH THE EX RAL GAS OR GEOTHERMAL ENERG CCEPTANCE OF THE MATERIALS IRRANTS THAT ONLY THE MATER DELIVERED BY TRANSPORTER This Transporter State This will certify that t
above described location, and that it was tele materials were added to this load, and that the DRIVER:	361.001 et seq., AND REGULATION. DRILLING FLUIDS, PRODUCED WAT DEVELOPMENT OR PRODUCTION OF ALSO AS A CONDITION TO SUNDAN THIS JOB TICKET. TRANSPORTER F BY OPERATOR/SHIPPER TO TRA SERVICES, INC'S FACILITY FOR D Dorter loaded the material to dered by the above descu- ne material was delivered	RELATED THERE WI CRUDE OIL OR NATU CRUDE OIL OR NATU EXESERVICES, INC'S A EPRESENTS AND WA ISPORTER IS NOW SPOSAL. epresented by ibed shipper. without incid	ASTE ASSOCIATED WITH THE EX RAL GAS OR GEOTHERMAL ENERGY CCCEPTANCE OF THE MATERIALS (CREPTANCE OF THE MATERIALS) (RRANTS THAT ONLY THE MATERI DELIVERED BY TRANSPORTER of this Transporter State This will certify that re lent.

THE		ICES, Inc.	TICKET No. 51361	11
Illi Busines	P.O. Box 1/37 Eunice, New Me ss: (575) 394-2511 • Dispos	al: (575) 390-7842	DATE: 6-13	-19
ASE OPERATOR/SHIP	PPER/COMPANY:	we	TIME: 3: 1/2 A	M/PM
EASE NAME:	aleva Su	OC	VEHICLE NO:	2
RIG NAME & NUMBER	:	TUKINA	PHONE:	11.00
TRANSPORTER COMP	PANY: Chavez	TNCKING	PHONE: 575.969.	4289
GENERATOR COMPA	NY MAN'S NAME:	mael Estrado		
CHARGE TO:	auc		[] Rinsate [] BS&W Co	ontent:
	[ ] Tank Bottoms	[] Drilling Fluids	[ ] Jet Out	
TYPE OF MATERIAL	[] Solids	Contaminated Soil		
Description:		- Ch	( )	
	[ ] BBLS	: 11 YARD 12	: []	
VOLUME OF MATERIAL	[]BBL3		C-133# (eq	
STICKERS,	CODES, NUMBERS, ETC	HEREWITH IS MATERIAL EXEMPT	RESENTS AND WARRANTS THAT THE WASTE M M THE RESOURCE, CONSERVATION AND RECO 40 U.S.C. § 6901, et seq., THE NM HEALTH 5 RELATED THERETO, BY VIRTUE OF THE EXS ERS, AND OTHER WASTE ASSOCIATED WITT ERS, AND OTHER WASTE ASSOCIATED WITT	EMPTION AF
THIS WILL CER above described		361.001 et seq., AND REGULAR DRILLING FLUIDS, PRODUCED WAT DEVELOPMENT OR PRODUCTION OF ALSO AS A CONDITION TO SUNDAN THIS JOB TICKET. TRANSPORTER BY OPERATOR/SHIPPER TO TRA SERVICES, INC'S FACILITY FOR T	ERS, AND OTHER WASTE ASSOCIATED WIT CRUDE OIL OR NATURAL GAS OR GEOTHERM CE SERVICES, INC.'S ACCEPTANCE OF THE MA REPRESENTS AND WARRANTS THAT ONLY TH INSPORTER IS NOW DELIVERED BY TRAN ISPOSAL. TEPPESENTED by this Transported with debipage. This will certify	NAL ENERGY. ATERIALS SHI HE MATERIAL ISPORTER TO
THIS WILL CER above described materials were ac		361.001 et seq., AND REGULTION DRILLING FLUIDS, PRODUCED WAT DEVELOPMENT OR PRODUCTION OF ALSO AS A CONDITION TO SUNDAN THIS JOB TICKET. TRANSPORTER DR OREGATOR/SHIPPER TO TRA	ERS, AND OTHER WASTE ASSOCIATED WIT CRUDE OIL OR NATURAL GAS OR GEOTHERM CE SERVICES, INC.'S ACCEPTANCE OF THE MA REPRESENTS AND WARRANTS THAT ONLY TH INSPORTER IS NOW DELIVERED BY TRAN ISPOSAL. TEPPESENTED by this Transported with debipage. This will certify	NAL ENERGY. ATERIALS SHI HE MATERIAL ISPORTER TO
THIS WILL CER above described materials were ac DRIVER:	<b>TIFY</b> that the above Tra location, and that it we dded to this load, and to	361.001 et seq., AND REGULAR DRILLING FLUIDS, PRODUCED WAT DEVELOPMENT OR PRODUCTION OF ALSO AS A CONDITION TO SUNDAN THIS JOB TICKET. TRANSPORTER BY OPERATOR/SHIPPER TO TRA SERVICES, INC'S FACILITY FOR T	ERS, AND OTHER WASTE ASSOCIATED WIT CRUDE OIL OR NATURAL GAS OR GEOTHERM CE SERVICES, INC.'S ACCEPTANCE OF THE MA REPRESENTS AND WARRANTS THAT ONLY TH INSPORTER IS NOW DELIVERED BY TRAN ISPOSAL. TEPPESENTED by this Transported with debipage. This will certify	NAL ENERGY. ATERIALS SHI HE MATERIAL ISPORTER TO
THIS WILL CER above described materials were ac DRIVER:	<b>TIFY</b> that the above Tra location, and that it we ded to this load, and t	361.001 ef seq., AND REGULAR DRILLING FLUIDS, PRODUCED WAT DEVELOPMENT OR PRODUCTION OF ALSO AS A CONDITION TO SUNDAN THIS JOB TICKET. TRANSPORTER BY OPERATOR/SHIPPER TO TRA SERVICES, INC:S FACILITY FOR T ansporter loaded the material as tendered by the above desc hat the material was delivered	ERS, AND OTHER WASTE ASSOCIATED WITH CRUDE OIL OR NATURAL GAS OR GEOTHERM CE SERVICES, INC'S ACCEPTANCE OF THE MAR REPRESENTS AND WARRANTS THAT ONLY TH INSPORTER IS NOW DELIVERED BY TRAN INSPOSAL. represented by this Transporter ribed shipper. This will certify I without incident.	ALENERGY. ATERIALS SHI HE MATERIAL ISPORTER TO er Stater y that no

LEASE OPERATOR/SHIPPER/COMPANY:	Mexico 888231 Ostati (575) 390-7842
LEASE OPERATOR/SHIPPER/COMPANY:	DATE: 6-13-19 TIME: 7 2 ANALYM
RIG NAME & NUMBER:	VEHICLE NO:
TRANSPORTER COMPLEX.	
GENERATOR COMPANY MAN'S NAME:	THAT K LING PHONES TO GLUP ANT
CHARGE TO: Charle	and the second states and the second
TYPE OF     [ ] Tank Bottoms       MATERIAL     [ ] Solids       Description:	[ ] Drilling Fluids     [ ] Rinsate     [ ] BS&W Content:       [ ] Contaminated Soil     [ ] Jet Out
VOLUME OF []BBLS	S VARD 14 S 1
RRC or API #	C-133# ( -a.
HIS WILL CERTIFY that the above Transp bove described location, and that it was te	<ul> <li>DEVELOPMENT OR PRODUCTION OF CONTROL OF CONTROLS ACCEPTANCE OF THE WATERIALS SHIPPED ALSO AS A CONDITION TO SUNDAMCE SERVICES, INC.'S ACCEPTANCE OF THE WATERIAL SENTENCES AND WARRANTS THAT DRUP THE WATERIAL DE BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUSPECT SERVICES, INC.'S FACILITY FOR DISPOSAL.</li> <li>SERVICES, INC.'S FACILITY FOR DISPOSAL.</li> <li>DOORTER loaded the material represented by this Transporter Statementer and endered by the above described shipper. This will certify that no act the material was delivered without incident.</li> </ul>
aterials were added to this load, and that t	the material was delivered without incident.
maning, JBAP	enur
DRIVER:	la dia
FACILITY REPRESENTATIVE:	
(SIGNATURE) FACILITY REPRESENTATIVE: (SIGNATURE) White - Sundance	Canary - Sundance Acct #1 Pink - Transporter tive Services LLC + www.VertigoCreative.com + Form#SDI-0046

#### APPENDIX F

Laboratory Analytical Reports



Project Id:0WL051319DContact:Will Soderstrom

**Project Location:** 

Certificate of Analysis Summary 627723

KJ Environmental & Civil Engineering, Aubrey, TX

TNI PACOREONE

Project Name: Bert Meader Well Pad 1RP-5498

Date Received in Lab:Thu Jun-13-19 06:36 pmReport Date:17-JUN-19Project Manager:Jessica Kramer

	Lab Id:	627723-0	001	627723-0	002	627723-0	003	627723-	004	627723-0	005	627723-	006
A star I and a Desamand a J	Field Id:	CS-01-F	7 2'	CS-02-F	2'	CS-03-H	F 2'	CS-04-I	F 2'	CS-05-H	F 2'	CS-06-1	F 2'
Analysis Requested	Depth:	2-		2-		2-		2-		2-		2-	
	Matrix:	SOIL		SOIL		SOIL	,	SOIL	,	SOIL	,	SOIL	_
	Sampled:	Jun-13-19	12:55	Jun-13-19	13:05	Jun-13-19	13:15	Jun-13-19	13:25	Jun-13-19	13:35	Jun-13-19	13:45
BTEX by SW 8260C	Extracted:	Jun-16-19	08:40	Jun-16-19 (	)8:40	Jun-16-19	08:40	Jun-16-19	08:40	Jun-16-19	08:40	Jun-16-19	08:40
SUB: T104704215-19-29	Analyzed:	Jun-16-19	10:55	Jun-16-19	10:35	Jun-16-19	11:15	Jun-16-19	11:34	Jun-16-19	11:54	Jun-16-19	12:14
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00104	0.00104	< 0.00106	0.00106	< 0.00105	0.00105	< 0.00104	0.00104	< 0.00108	0.00108	< 0.00106	0.00106
Toluene		< 0.00104	0.00104	< 0.00106	0.00106	< 0.00105	0.00105	< 0.00104	0.00104	< 0.00108	0.00108	< 0.00106	0.00106
Ethylbenzene		< 0.00104	0.00104	< 0.00106	0.00106	< 0.00105	0.00105	< 0.00104	0.00104	< 0.00108	0.00108	< 0.00106	0.00106
m,p-Xylenes		< 0.00208	0.00208	< 0.00211	0.00211	< 0.00210	0.00210	< 0.00209	0.00209	< 0.00216	0.00216	< 0.00211	0.00211
o-Xylene		< 0.00104	0.00104	< 0.00106	0.00106	< 0.00105	0.00105	< 0.00104	0.00104	< 0.00108	0.00108	< 0.00106	0.00106
Total Xylenes		< 0.00104	0.00104	< 0.00106	0.00106	< 0.00105	0.00105	< 0.00104	0.00104	< 0.00108	0.00108	< 0.00106	0.00106
Total BTEX		< 0.00104	0.00104	< 0.00106	0.00106	< 0.00105	0.00105	< 0.00104	0.00104	< 0.00108	0.00108	< 0.00106	0.00106
Chloride by EPA 300	Extracted:	Jun-14-19	15:00	Jun-14-19	15:00	Jun-14-19	15:00	Jun-14-19	15:00	Jun-14-19	15:00	Jun-14-19	15:00
	Analyzed:	Jun-14-19	18:09	Jun-14-19	18:16	Jun-14-19	18:23	Jun-14-19	18:45	Jun-14-19	18:52	Jun-14-19	19:14
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		300	5.20	2650	26.1	<5.26	5.26	<5.22	5.22	<5.46	5.46	<5.22	5.22
Percent Moisture	Extracted:												
	Analyzed:	Jun-14-19	17:35	Jun-14-19	17:35	Jun-14-19	17:35	Jun-14-19	17:35	Jun-14-19	17:35	Jun-14-19	17:35
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		3.99		5.14		4.74		4.51		7.63		5.03	
TPH by SW8015 Mod	Extracted:	Jun-15-19	10:00	Jun-15-19	10:00	Jun-15-19	10:00	Jun-15-19	10:00	Jun-15-19	10:00	Jun-15-19	10:00
	Analyzed:	Jun-16-19	03:10	Jun-16-19 (	04:23	Jun-16-19	04:47	Jun-16-19	05:11	Jun-16-19	05:35	Jun-16-19	05:59
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.6	15.6	<15.7	15.7	<15.7	15.7	<15.7	15.7	<16.2	16.2	<15.8	15.8
Diesel Range Organics (DRO)		<15.6	15.6	<15.7	15.7	<15.7	15.7	<15.7	15.7	<16.2	16.2	<15.8	15.8
Motor Oil Range Hydrocarbons (MRO)		<15.6	15.6	<15.7	15.7	<15.7	15.7	<15.7	15.7	<16.2	16.2	<15.8	15.8
Total TPH		<15.6	15.6	<15.7	15.7	<15.7	15.7	<15.7	15.7	<16.2	16.2	<15.8	15.8

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.

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

fession kenner

Jessica Kramer Project Assistant



Project Id:0WL051319DContact:Will Soderstrom

**Project Location:** 

## Certificate of Analysis Summary 627723

KJ Environmental & Civil Engineering, Aubrey, TX

Project Name: Bert Meader Well Pad 1RP-5498

Date Received in Lab: Thu Jun-13-19 06:36 pm Report Date: 17-JUN-19 Project Manager: Jessica Kramer

	1				
	Lab Id:	627723-007	627723-008		
Analysis Requested	Field Id:	CS-07-SW-1'	CS-08-SW-1'		
Anuiysis Kequesieu	Depth:	2-	1-		
	Matrix:	SOIL	SOIL		
	Sampled:	Jun-13-19 13:55	Jun-13-19 14:05		
BTEX by SW 8260C	Extracted:	Jun-16-19 08:40	Jun-16-19 08:40		
SUB: T104704215-19-29	Analyzed:	Jun-16-19 12:33	Jun-16-19 12:53		
	Units/RL:	mg/kg RL	mg/kg RL		
Benzene		<0.00107 0.00107	<0.00105 0.00105		
Toluene		<0.00107 0.00107	<0.00105 0.00105		
Ethylbenzene		<0.00107 0.00107	<0.00105 0.00105		
m,p-Xylenes		<0.00215 0.00215	<0.00210 0.00210		
o-Xylene		<0.00107 0.00107	<0.00105 0.00105		
Total Xylenes		<0.00107 0.00107	<0.00105 0.00105		
Total BTEX		<0.00107 0.00107	<0.00105 0.00105		
Chloride by EPA 300	Extracted:	Jun-14-19 15:00	Jun-14-19 15:00		
	Analyzed:	Jun-14-19 19:21	Jun-14-19 19:28		
	Units/RL:	mg/kg RL	mg/kg RL		
Chloride		<5.41 5.41	<5.33 5.33		
Percent Moisture	Extracted:				
	Analyzed:	Jun-14-19 17:35	Jun-14-19 17:35		
	Units/RL:	% RL	% RL		
Percent Moisture		7.51	5.55		
TPH by SW8015 Mod	Extracted:	Jun-15-19 10:00	Jun-15-19 10:00		
	Analyzed:	Jun-16-19 06:23	Jun-16-19 06:47		
	Units/RL:	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<16.2 16.2	<15.8 15.8		
Diesel Range Organics (DRO)		<16.2 16.2	<15.8 15.8		
Motor Oil Range Hydrocarbons (MRO)		<16.2 16.2	<15.8 15.8		
Total TPH		<16.2 16.2	<15.8 15.8		

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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fession kenner

Jessica Kramer Project Assistant

# Analytical Report 627723

for KJ Environmental & Civil Engineering

Project Manager: Will Soderstrom

Bert Meader Well Pad 1RP-5498

#### 0WL051319D

#### 17-JUN-19

Collected By: Client





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

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429), North Carolina (483)



17-JUN-19



Project Manager: **Will Soderstrom KJ Environmental & Civil Engineering** 500 Moseley Rd Aubrey, TX 76227

Reference: XENCO Report No(s): 627723 Bert Meader Well Pad 1RP-5498 Project Address:

#### Will Soderstrom:

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) 627723. 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. 627723 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,

Jession KRAMER

Jessica Kramer Project Assistant

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

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## Sample Cross Reference 627723



#### KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-01-F 2'	S	06-13-19 12:55	2	627723-001
CS-02-F 2'	S	06-13-19 13:05	2	627723-002
CS-03-F 2'	S	06-13-19 13:15	2	627723-003
CS-04-F 2'	S	06-13-19 13:25	2	627723-004
CS-05-F 2'	S	06-13-19 13:35	2	627723-005
CS-06-F 2'	S	06-13-19 13:45	2	627723-006
CS-07-SW-1'	S	06-13-19 13:55	2	627723-007
CS-08-SW-1'	S	06-13-19 14:05	1	627723-008
Dup-01	S	06-13-19 00:00	1	Not Analyzed



#### CASE NARRATIVE

Client Name: KJ Environmental & Civil Engineering Project Name: Bert Meader Well Pad 1RP-5498

Project ID: *0WL051319D* Work Order Number(s): *627723*  Report Date: 17-JUN-19 Date Received: 06/13/2019

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None





## KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id:	CS-01-F 2'		Matrix:	Soil		Date Received:06.1	3.19 18.3	6	
Lab Sample	Id: 627723-001		Date Collec	cted: 06.13.19 12.55		Sample Depth: 2			
Analytical M	ethod: Chloride by EPA	A 300				Prep Method: E30	0P		
Tech:	CHE					% Moisture: 3.99	)		
Analyst:	CHE		Date Prep:	06.14.19 15.00		Basis: Dry	Weight		
Seq Number:	3092450								
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	300	5.20	mg/kg	06.14.19 18.09		1	

Analytical Method: TPH by SW8013	5 Mod				P	Prep Method: T	X1005P	
Tech: ARM					9	6 Moisture: 3.	99	
Analyst: ARM		Date Prep:	06.15.	19 10.00	E	Basis: D	ry Weight	
Seq Number: 3092440								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.6	15.6		mg/kg	06.16.19 03.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.6	15.6		mg/kg	06.16.19 03.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.6	15.6		mg/kg	06.16.19 03.10	U	1
Total TPH	PHC635	<15.6	15.6		mg/kg	06.16.19 03.10	U	1
Surrogate	(	% Cas Number	6 Recovery	Units	Limits	Analysis Date	e Flag	
1-Chlorooctane	11	1-85-3	98	%	70-135	06.16.19 03.10		
o-Terphenyl	84	-15-1	90	%	70-135	06.16.19 03.10	1	





1

## KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id: CS-01-F 2'		Matrix:	Soil	]	Date Received:06.1	3.19 18.3	5	
Lab Sample Id: 627723-001		Date Collect	ted: 06.13.19 12.55	:	Sample Depth: 2			
Analytical Method: BTEX by SW 8	260C			]	Prep Method: SW	5035A		
Tech: HOP					% Moisture: 3.99	)		
Analyst: HOP		Date Prep:	06.16.19 08.40	]	Basis: Dry	Weight		
Seq Number: 3092387				1	SUB: T104704215	-19-29		
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Parameter Benzene	Cas Number 71-43-2		RL .00104	Units mg/kg	<b>Analysis Date</b> 06.16.19 10.55	<b>Flag</b> U	<b>Dil</b>	
		<0.00104 0						
Benzene	71-43-2	<0.00104 0 <0.00104 0	.00104	mg/kg	06.16.19 10.55	U		
Benzene Toluene	71-43-2 108-88-3	<0.00104 0 <0.00104 0 <0.00104 0	.00104 .00104	mg/kg mg/kg	06.16.19 10.55 06.16.19 10.55	U U U		
Benzene Toluene Ethylbenzene	71-43-2 108-88-3 100-41-4	<0.00104 0 <0.00104 0 <0.00104 0 <0.00104 0 <0.00208 0	.00104 .00104 .00104	mg/kg mg/kg mg/kg	06.16.19 10.55 06.16.19 10.55 06.16.19 10.55	U U U U		

Total BTEX	< 0.00104 0.001	mg/kg	06.16.19 10.55	U	
Surrogate	% Reco Cas Number	overy Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	102 %	74-126	06.16.19 10.55	
1,2-Dichloroethane-D4	17060-07-0	107 %	80-120	06.16.19 10.55	
Toluene-D8	2037-26-5	102 %	73-132	06.16.19 10.55	
4-Bromofluorobenzene	460-00-4	91 %	58-152	06.16.19 10.55	





#### KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id:	Sample Id: CS-02-F 2'		Matrix:	Soil		б		
Lab Sample I	d: 627723-002		Date Colle	cted: 06.13.19 13.05		Sample Depth:	2	
Analytical Mo	ethod: Chloride by EPA	300				Prep Method: 1	E300P	
Tech:	CHE					% Moisture:	5.14	
Analyst:	CHE		Date Prep:	06.14.19 15.00		Basis: 1	Dry Weight	
Seq Number:	3092450							
Parameter		Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil
Chloride		16887-00-6	2650	26.1	mg/kg	06.14.19 18.1	6	5

Analytical Method: TPH by SW801	5 Mod				P	Prep Method: TX	1005P	
Tech: ARM					9	6 Moisture: 5.1	4	
Analyst: ARM		Date Prep:	06.15.	19 10.00	E	Basis: Dry	Weight	
Seq Number: 3092440								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.7	15.7		mg/kg	06.16.19 04.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.7	15.7		mg/kg	06.16.19 04.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.7	15.7		mg/kg	06.16.19 04.23	U	1
Total TPH	PHC635	<15.7	15.7		mg/kg	06.16.19 04.23	U	1
Surrogate		% Cas Number	6 Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	11	1-85-3	112	%	70-135	06.16.19 04.23		
o-Terphenyl	84	-15-1	117	%	70-135	06.16.19 04.23		





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#### KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id:         CS-02-F 2'           Lab Sample Id:         627723-002	Matrix: Date Collec	Soil cted: 06.13.19 13.05		Date Received:06. Sample Depth: 2	13.19 18.3	6	
Analytical Method: BTEX by SW	3260C				Prep Method: SW	5035A	
Tech: HOP					% Moisture: 5.14	4	
Analyst: HOP		Date Prep:	06.16.19 08.40		Basis: Dry	Weight	
Seq Number: 3092387				i i	SUB: T104704215	-19-29	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Parameter Benzene	Cas Number 71-43-2		RL 0.00106	Units mg/kg	Analysis Date 06.16.19 10.35	<b>Flag</b> U	<b>Dil</b>
		<0.00106			•		<b>Dil</b> 1 1
Benzene	71-43-2	<0.00106 <0.00106	0.00106	mg/kg	06.16.19 10.35	U	1
Benzene Toluene	71-43-2 108-88-3	<0.00106 <0.00106 <0.00106	0.00106 0.00106	mg/kg mg/kg	06.16.19 10.35 06.16.19 10.35	U U U	1

Total Xylenes Total BTEX	1330-20-7	<0.00106 <0.00106	0.00106 0.00106		mg/kg mg/kg	06.16.19 10.35 06.16.19 10.35	U U
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane		1868-53-7	103	%	74-126	06.16.19 10.35	
1,2-Dichloroethane-D4		17060-07-0	108	%	80-120	06.16.19 10.35	
Toluene-D8		2037-26-5	103	%	73-132	06.16.19 10.35	
4-Bromofluorobenzene		460-00-4	92	%	58-152	06.16.19 10.35	





## KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id:         CS-03-F 2'           Lab Sample Id:         627723-003		Matrix: Date Collecte	Soil ed: 06.13.19 13.15		Date Received Sample Depth	d:06.13.19 18.3 n: 2	36
Analytical Method:Chloride by EPA 3Tech:CHEAnalyst:CHESeq Number:3092450	300	Date Prep:	06.14.19 15.00		Prep Method: % Moisture: Basis:	E300P 4.74 Dry Weight	
Parameter	Cas Number	Result F	RL	Units	Analysis D	Date Flag	Dil

	Cubituniou	1000000	RL	Cinto	Analysis Date	Thus	DI	
Chloride	16887-00-6	<5.26	5.26	mg/kg	06.14.19 18.23	U	1	

Analytical Method: TPH by SW801				P	rep Method: TX	1005P		
Tech: ARM					9	6 Moisture: 4.74	4	
Analyst: ARM		Date Prep:	06.15.	19 10.00	E	Basis: Dry	Weight	
Seq Number: 3092440								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.7	15.7		mg/kg	06.16.19 04.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.7	15.7		mg/kg	06.16.19 04.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.7	15.7		mg/kg	06.16.19 04.47	U	1
Total TPH	PHC635	<15.7	15.7		mg/kg	06.16.19 04.47	U	1
Surrogate		% Cas Number	6 Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	11	1-85-3	113	%	70-135	06.16.19 04.47		
o-Terphenyl	84	-15-1	115	%	70-135	06.16.19 04.47		





#### KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id: CS-03-F 2'	Matrix:	Soil	Date Received:06.13.19 18.36				
Lab Sample Id: 627723-003		Date Collec	ted: 06.13.19 13.15	5	Sample Depth: 2		
Analytical Method: BTEX by SW	/ 8260C			]	Prep Method: SW	5035A	
Tech: HOP				C	% Moisture: 4.74	1	
Analyst: HOP		Date Prep:	06.16.19 08.40	]	Basis: Dry	Weight	
Seq Number: 3092387				2	-19-29		
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00105 0	.00105	mg/kg	06.16.19 11.15	U	1
Toluene	108-88-3	< 0.00105 0	.00105	mg/kg	06.16.19 11.15	U	1
Ethylbenzene	100-41-4	< 0.00105 0	.00105	mg/kg	06.16.19 11.15	U	1
X7 1							
m,p-Xylenes	179601-23-1	< 0.00210 0	.00210	mg/kg	06.16.19 11.15	U	1
m,p-Xylenes o-Xylene	179601-23-1 95-47-6		.00210 .00105	mg/kg mg/kg	06.16.19 11.15 06.16.19 11.15	U U	1 1
1		<0.00105 0					

Cotal BTEX	< 0.00105	< 0.00105 0.00105			06.16.19 11.15	U
Surrogate	% Cas Number	Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	74-126	06.16.19 11.15	
1,2-Dichloroethane-D4	17060-07-0	104	%	80-120	06.16.19 11.15	
Toluene-D8	2037-26-5	101	%	73-132	06.16.19 11.15	
4-Bromofluorobenzene	460-00-4	88	%	58-152	06.16.19 11.15	





## KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id:         CS-04-F 2'           Lab Sample Id:         627723-004		Matrix: Date Collecte	Soil d: 06.13.19 13.25		Date Received Sample Depth:	:06.13.19 18.30 :2	6
Analytical Method:Chloride by EPATech:CHEAnalyst:CHESeq Number:3092450	300	Date Prep:	06.14.19 15.00	9	Prep Method: % Moisture: Basis:	E300P 4.51 Dry Weight	
Parameter	Cas Number	Result R	8L	Units	Analysis Da	ate Flag	Dil

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	<5.22	5.22	mg/kg	06.14.19 18.45	U	1	

Analytical Method: TPH by SW801	5 Mod				F	rep Method: TX	1005P	
Tech: ARM					9	6 Moisture: 4.5	1	
Analyst: ARM		Date Prepa	: 06.15.	19 10.00	E	Basis: Dr	Weight	
Seq Number: 3092440								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.7	15.7		mg/kg	06.16.19 05.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.7	15.7		mg/kg	06.16.19 05.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.7	15.7		mg/kg	06.16.19 05.11	U	1
Total TPH	PHC635	<15.7	15.7		mg/kg	06.16.19 05.11	U	1
Surrogate	(	% Cas Number	6 Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	11	1-85-3	108	%	70-135	06.16.19 05.11		
o-Terphenyl	84	-15-1	101	%	70-135	06.16.19 05.11		





#### KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id: CS-04-F 2'		Matrix:	Soil	]	Date Received:06.1	3.19 18.3	6
Lab Sample Id: 627723-004		Date Collect	ted: 06.13.19 13.25	5	Sample Depth: 2		
Analytical Method: BTEX by SW	8260C			]	Prep Method: SW	5035A	
Tech: HOP				Q	% Moisture: 4.51	l	
Analyst: HOP		Date Prep:	06.16.19 08.40	]	Basis: Dry	Weight	
Seq Number: 3092387		L.		2	SUB: T104704215	-19-29	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00104 0	.00104	mg/kg	06.16.19 11.34	U	1
Toluene	108-88-3	< 0.00104 0	.00104	mg/kg	06.16.19 11.34	U	1
Ethylbenzene	100-41-4	< 0.00104 0	.00104	mg/kg	06.16.19 11.34	U	1
m,p-Xylenes	179601-23-1	< 0.00209 0	.00209	mg/kg	06.16.19 11.34	U	1
o-Xylene	95-47-6	< 0.00104 0	.00104	mg/kg	06.16.19 11.34	U	1
Total Xylenes	1330-20-7	< 0.00104 0	.00104	mg/kg	06.16.19 11.34	U	1
Total BTEX							

 						•	
Surrogate	% R Cas Number	ecovery	Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	104	%	74-126	06.16.19 11.34		
1,2-Dichloroethane-D4	17060-07-0	100	%	80-120	06.16.19 11.34		
Toluene-D8	2037-26-5	99	%	73-132	06.16.19 11.34		
4-Bromofluorobenzene	460-00-4	90	%	58-152	06.16.19 11.34		





#### KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id: <b>CS-05-F 2'</b> Lab Sample Id: 627723-005		Matrix: Date Collec	Soil cted: 06.13.19 13.35		Date Received:06.13.19 18.3 Sample Depth: 2		6
Analytical Method: Chloride by EPA	300				Prep Method: E	300P	
Tech: CHE					% Moisture: 7.	.63	
Analyst: CHE		Date Prep:	06.14.19 15.00		Basis: D	ry Weight	
Seq Number: 3092450							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.46	5.46	mg/kg	06.14.19 18.52	U	1

Analytical Method: TPH by SW8013	5 Mod				P	Prep Method: TX	(1005P	
Tech: ARM					9	6 Moisture: 7.6	53	
Analyst: ARM		Date Prep:	06.15.	19 10.00	E	Basis: Dr	y Weight	
Seq Number: 3092440								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<16.2	16.2		mg/kg	06.16.19 05.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<16.2	16.2		mg/kg	06.16.19 05.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<16.2	16.2		mg/kg	06.16.19 05.35	U	1
Total TPH	PHC635	<16.2	16.2		mg/kg	06.16.19 05.35	U	1
Surrogate		% Cas Number	6 Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	11	1-85-3	109	%	70-135	06.16.19 05.35		
o-Terphenyl	84	-15-1	106	%	70-135	06.16.19 05.35		



# **Certificate of Analytical Results 627723**



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#### KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id: CS-05-F 2'		Matrix:	Soil		Date Received:06.1	3.19 18.3	5
Lab Sample Id: 627723-005		Date Collect	ed: 06.13.19 13.35		Sample Depth: 2		
Analytical Method: BTEX by SW 82	260C				Prep Method: SW	5035A	
Tech: HOP					% Moisture: 7.63	3	
Analyst: HOP		Date Prep:	06.16.19 08.40		Basis: Dry	Weight	
Seq Number: 3092387					SUB: T104704215	-19-29	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Parameter Benzene	Cas Number 71-43-2		RL 00108	Units mg/kg	<b>Analysis Date</b> 06.16.19 11.54	Flag U	<b>Dil</b>
		<0.00108 0.			•		<b>Dil</b> 1 1
Benzene	71-43-2	<0.00108 0. <0.00108 0.	00108	mg/kg	06.16.19 11.54	U	<b>Dil</b> 1 1 1
Benzene Toluene	71-43-2 108-88-3	<0.00108 0. <0.00108 0. <0.00108 0.	00108 00108	mg/kg mg/kg	06.16.19 11.54 06.16.19 11.54	U U U	1 1
Benzene Toluene Ethylbenzene	71-43-2 108-88-3 100-41-4	<0.00108 0. <0.00108 0. <0.00108 0. <0.00216 0.	00108 00108 00108	mg/kg mg/kg mg/kg	06.16.19 11.54 06.16.19 11.54 06.16.19 11.54	U U U U	1 1

Total BTEX	<0.00108 0.0	0108		mg/kg	06.16.19 11.54	U
Surrogate	% Re Cas Number	covery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	74-126	06.16.19 11.54	
1,2-Dichloroethane-D4	17060-07-0	107	%	80-120	06.16.19 11.54	
Toluene-D8	2037-26-5	105	%	73-132	06.16.19 11.54	
4-Bromofluorobenzene	460-00-4	87	%	58-152	06.16.19 11.54	





## KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id: <b>CS-06-F 2'</b> Lab Sample Id: 627723-006		Matrix: Date Collecte	Soil d: 06.13.19 13.45		Date Received Sample Depth	1:06.13.19 18.30 ::2	5
Analytical Method: Chloride by EPA 3 Tech: CHE Analyst: CHE Seq Number: 3092450	00	Date Prep:	06.14.19 15.00		Prep Method: % Moisture: Basis:	E300P 5.03 Dry Weight	
Parameter	Cas Number	Result R	L	Units	Analysis D	ate Flag	Dil

rarameter	Cas Number	Kesuit	KL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.22	5.22	mg/kg	06.14.19 19.14	U	1

Analytical Method: TPH by SW801	5 Mod				Р	rep Method: TX	1005P	
Tech: ARM					%	Moisture: 5.03	3	
Analyst: ARM		Date Prep:	06.15.	19 10.00	В	Basis: Dry	Weight	
Seq Number: 3092440								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.8	15.8		mg/kg	06.16.19 05.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.8	15.8		mg/kg	06.16.19 05.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.8	15.8		mg/kg	06.16.19 05.59	U	1
Total TPH	PHC635	<15.8	15.8		mg/kg	06.16.19 05.59	U	1
Surrogate	(	% Cas Number	6 Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	11	1-85-3	96	%	70-135	06.16.19 05.59		
o-Terphenyl	84	-15-1	80	%	70-135	06.16.19 05.59		





## KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id: CS-06-F 2'		Matrix:	Soil		Date Received:06.1	13.19 18.3	6
Lab Sample Id: 627723-006		Date Collec	ted: 06.13.19 13.45	Sample Depth: 2			
Analytical Method: BTEX by SW 8	260C				Prep Method: SW	5035A	
Tech: HOP					% Moisture: 5.03	3	
Analyst: HOP		Date Prep:	06.16.19 08.40		Basis: Dry	Weight	
Seq Number: 3092387		L.			SUB: T104704215	-19-29	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00106	0.00106	mg/kg	06.16.19 12.14	U	1
Toluene	108-88-3	<0.00106	).00106	mg/kg	06.16.19 12.14	U	1
Ethylbenzene	100-41-4	<0.00106	).00106	mg/kg	06.16.19 12.14	U	1
m,p-Xylenes	179601-23-1	<0.00211	0.00211	mg/kg	06.16.19 12.14	U	1
o-Xylene	95-47-6	<0.00106 (	).00106	mg/kg	06.16.19 12.14	U	1
Total Xylenes	1330-20-7	<0.00106	0.00106	mg/kg	06.16.19 12.14	U	1
Total BTEX		<0.00106 (	).00106	mg/kg	06.16.19 12.14	U	1

	0.00100 0.0010	<i>,</i> 0	mg/ Kg	00.10.17 12.14	U
Surrogate	% Reco Cas Number	very Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107 %	74-126	06.16.19 12.14	
1,2-Dichloroethane-D4	17060-07-0	106 %	80-120	06.16.19 12.14	
Toluene-D8	2037-26-5	97 %	73-132	06.16.19 12.14	
4-Bromofluorobenzene	460-00-4	90 %	58-152	06.16.19 12.14	





## KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id: Lab Sample Id:	<b>CS-07-SW-1'</b> : 627723-007		Matrix: Date Collec	Soil ted: 06.13.19 13.55		Date Received:06.13.19 18.36 Sample Depth: 2		
Analytical Met Tech:	thod: Chloride by EPA 3 CHE	00				Prep Method: % Moisture:	E300P 7.51	
Analyst:	CHE		Date Prep:	06.14.19 15.00		Basis:	Dry Weight	
Seq Number:	3092450							
Parameter		Cas Number	Result	RL	Units	Analysis D	ate Flag	Dil

1 araneter	Cas Number	Kesutt	KL	Units	Analysis Date	riag	Dii
Chloride	16887-00-6	<5.41	5.41	mg/kg	06.14.19 19.21	U	1

Analytical Method: TPH by SW801	5 Mod				F	Prep Method: TX	1005P	
Tech: ARM					9	6 Moisture: 7.5	1	
Analyst: ARM		Date Prep:	06.15.	19 10.00	E	Basis: Dry	Weight	
Seq Number: 3092440								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<16.2	16.2		mg/kg	06.16.19 06.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<16.2	16.2		mg/kg	06.16.19 06.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<16.2	16.2		mg/kg	06.16.19 06.23	U	1
Total TPH	PHC635	<16.2	16.2		mg/kg	06.16.19 06.23	U	1
Surrogate		% Cas Number	6 Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	11	1-85-3	96	%	70-135	06.16.19 06.23		
o-Terphenyl	84	-15-1	81	%	70-135	06.16.19 06.23		





#### KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id:         CS-07-SW-1'           Lab Sample Id:         627723-007		Matrix: Date Colle	Soil cted: 06.13.19 13.55	Date Received:06.13.19 18.36 Sample Depth: 2			
Analytical Method: BTEX by S Tech: HOP Analyst: HOP	W 8260C	Date Prep:	06.16.19 08.40		Prep Method: SW % Moisture: 7.51 Basis: Dry		
Seq Number: 3092387		1			SUB: T104704215	-19-29	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00107	0.00107	mg/kg	06.16.19 12.33	U	1
Toluene	108-88-3	< 0.00107	0.00107	mg/kg	06.16.19 12.33	U	1
Ethylbenzene	100-41-4	< 0.00107	0.00107	mg/kg	06.16.19 12.33	U	1
m,p-Xylenes	179601-23-1	< 0.00215	0.00215	mg/kg	06.16.19 12.33	U	1
o-Xylene	95-47-6	< 0.00107	0.00107	mg/kg	06.16.19 12.33	U	1
Total Xylenes	1330-20-7	< 0.00107	0.00107	mg/kg	06.16.19 12.33	U	1
Total BTEX		< 0.00107	0.00107	mg/kg	06.16.19 12.33	U	1
		%	Recovery				

		% Recovery				
Surrogate	Cas Number	, o 11000 ( 01 j	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	74-126	06.16.19 12.33	
1,2-Dichloroethane-D4	17060-07-0	108	%	80-120	06.16.19 12.33	
Toluene-D8	2037-26-5	100	%	73-132	06.16.19 12.33	
4-Bromofluorobenzene	460-00-4	90	%	58-152	06.16.19 12.33	





## KJ Environmental & Civil Engineering, Aubrey, TX

Sample Id:         CS-08-SW-1'           Lab Sample Id:         627723-008		Matrix: Date Collecte	Soil ed: 06.13.19 14.05		Date Received:06.13.19 18.30 Sample Depth: 1		
Analytical Method:Chloride by EPA 3Tech:CHEAnalyst:CHESeq Number:3092450	300	Date Prep:	06.14.19 15.00		Prep Method: % Moisture: Basis:	E300P 5.55 Dry Weight	
Parameter	Cas Number	Result F	8L	Units	Analysis D	Date Flag	Dil

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.33	5.33	mg/kg	06.14.19 19.28	U	1

Analytical Method: TPH by SW801	5 Mod				P	rep Method: TX	1005P	
Tech: ARM					9	6 Moisture: 5.5	5	
Analyst: ARM		Date Prep:	06.15.	19 10.00	E	Basis: Dry	Weight	
Seq Number: 3092440								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.8	15.8		mg/kg	06.16.19 06.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.8	15.8		mg/kg	06.16.19 06.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.8	15.8		mg/kg	06.16.19 06.47	U	1
Total TPH	PHC635	<15.8	15.8		mg/kg	06.16.19 06.47	U	1
Surrogate		% Cas Number	6 Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	11	1-85-3	98	%	70-135	06.16.19 06.47		
o-Terphenyl	84	-15-1	84	%	70-135	06.16.19 06.47		



Total Xylenes

# **Certificate of Analytical Results 627723**



06.16.19 12.53

mg/kg

U

1

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## KJ Environmental & Civil Engineering, Aubrey, TX

Bert Meader Well Pad 1RP-5498

Sample Id: <b>CS-08-SW-1'</b> Lab Sample Id: 627723-008	Matrix: Date Collec	Soil cted: 06.13.19 14.05	Date Received:06.13.19 18.36 Sample Depth: 1				
Analytical Method: BTEX by SW Tech: HOP Analyst: HOP Seq Number: 3092387	Date Prep:	06.16.19 08.40	1	Prep Method: SW % Moisture: 5.55 Basis: Dry SUB: T104704215	5 Weight		
Parameter	Cas Number	Result	RL	Units	Analysis Date	171.	
	ous i tuniser	ittebuit	KL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2		0.00105	mg/kg	06.16.19 12.53	U Flag	<b>Dil</b>
Benzene Toluene		<0.00105			•	0	<b>Dil</b> 1 1
	71-43-2	<0.00105 <0.00105	0.00105	mg/kg	06.16.19 12.53	U	<b>Dil</b> 1 1 1 1
Toluene	71-43-2 108-88-3	<0.00105 <0.00105 <0.00105	0.00105 0.00105	mg/kg mg/kg	06.16.19 12.53 06.16.19 12.53	U U U	<b>Dil</b> 1 1 1 1 1 1 1

0.00105

Total BTEX	<0.00105 0.00105		mg/kg	06.16.19 12.53	U
Surrogate	% Recove Cas Number	ry Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7 10	5 %	74-126	06.16.19 12.53	
1,2-Dichloroethane-D4	17060-07-0 11	0 %	80-120	06.16.19 12.53	
Toluene-D8	2037-26-5 10	2 %	73-132	06.16.19 12.53	
4-Bromofluorobenzene	460-00-4 9	0 %	58-152	06.16.19 12.53	

< 0.00105

1330-20-7



# **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.
- RL Reporting Limit
- MDL Method Detection LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labor	ratory 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 627723

#### KJ Environmental & Civil Engineering

Bert Meader Well Pad 1RP-5498

<b>Analytical Method:</b> Seq Number: MB Sample Id:	<b>Chloride by EPA 30</b> 3092450 7680025-1-BLK	0	LCS San	Matrix: nple Id:	Solid 7680025-1	-BKS		Prep Method: E300P Date Prep: 06.14.19 LCSD Sample Id: 7680025-1-BSD			
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD RPI	D Limit Units	Analysis Date	Flag
Chloride	<0.858	250	238	95	238	95	90-110	0 2	20 mg/kg	06.14.19 16:11	
<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>Chloride by EPA 30</b> 3092450 627654-002	0		Matrix: nple Id:		)2 S		Da	Method: E30 te Prep: 06.1 ample Id: 627	4.19	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD RP	D Limit Units	Analysis Date	Flag
Chloride	87.1	250	330	97	330	97	90-110	0 2	20 mg/kg	06.14.19 16:32	
Analytical Method:	Chloride by EPA 30	0			G .1			1	Method: E30	0P	

i maij deal titemoat	Chioride by Errice	,0						11	op meun	Ju. 2000		
Seq Number:	3092450		]	Matrix:	Soil				Date Pr	ep: 06.1	4.19	
Parent Sample Id:	627723-003		MS San	nple Id:	627723-00	3 S		MS	D Sample	e Id: 6277	723-003 SD	
Parameter	Parent Result	Spike Amount	MS	MS % Dec	MSD	MSD	Limits	%RPD	RPD Lim	it Units	Analysis	Flag
	Kesuit	Amount	Result	%Rec	Result	%Rec					Date	

Analytical Method:	Percent Moisture					
Seq Number:	3092414	Matrix:	Solid			
		MB Sample Id:	3092414-1-BLK			
<b>D</b> (		MB		Units	Analysis	
Parameter		Result		Cints	Date	Flag

Analytical Method:	Percent Moisture						
Seq Number:	3092414	Matrix:	Soil				
Parent Sample Id:	627723-001	MD Sample Id:	627723-001 D				
Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	3.99	3.94	1	20	%	06.14.19 17:35	

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 627723

#### KJ Environmental & Civil Engineering

Bert Meader Well Pad 1RP-5498

Analytical Method:	Percent Moisture						
Seq Number:	3092414	Matrix:	Soil				
Parent Sample Id:	627806-001	MD Sample Id:	627806-001 D				
Parameter	Parent Result	MD Result	%RP	D RPD Li	mit Units	Analysis Date	Flag
Percent Moisture	12.3	12.5	2	20	%	06.14.19 17:35	

Analytical Method:	TPH by S	W8015 M	od						]	Prep Metho	d: TX1	005P	
Seq Number:	3092440				Matrix:	Solid				Date Pre	ep: 06.1	5.19	
MB Sample Id:	7680005-1	-BLK		LCS San	nple Id:	7680005-	1-BKS		LC	SD Sample	Id: 7680	0005-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	ORPD Limi	t Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	<8.00	1000	885	89	865	87	70-135	2	20	mg/kg	06.16.19 02:20	
Diesel Range Organics	(DRO)	<8.13	1000	939	94	855	86	70-135	9	20	mg/kg	06.16.19 02:20	
Surrogate		MB %Rec	MB Flag			LCS Flag	LCSI %Re		-	Limits	Units	Analysis Date	
1-Chlorooctane		103		1	00		97		7	70-135	%	06.16.19 02:20	
o-Terphenyl		90		1	09		89		7	70-135	%	06.16.19 02:20	

<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>TPH by SV</b> 3092440 627723-002		od	MS San	Matrix:		)1 S			rep Methoo Date Prej	p: 06.1	1005P 15.19 723-001 SD	
Parameter	027723-00	Parent Result	Spike Amount	MS MS Result	MS %Rec	MSD Result	MSD %Rec	Limits		RPD Limit		Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	13.1	1040	889	84	887	84	70-135	0	20	mg/kg	06.16.19 03:35	
Diesel Range Organics	(DRO)	<8.47	1040	941	90	885	85	70-135	6	20	mg/kg	06.16.19 03:35	
Surrogate					1S Rec	MS Flag	MSE %Re			limits	Units	Analysis Date	
1-Chlorooctane				8	36		87		7	0-135	%	06.16.19 03:35	
o-Terphenyl				8	37		81		7	0-135	%	06.16.19 03:35	

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 627723

#### KJ Environmental & Civil Engineering

Bert Meader Well Pad 1RP-5498

Analytical Method:	BTEX by SW 82600	C						F	Prep Method	I: SW:	5035A	
Seq Number:	3092387		]	Matrix:	Solid				Date Prep	o: 06.1	6.19	
MB Sample Id:	7679987-1-BLK		LCS San	nple Id:	7679987-1	I-BKS		LCS	SD Sample	d: 767	9987-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00100	0.0500	0.0416	83	0.0462	92	62-132	10	25	mg/kg	06.16.19 08:13	
Toluene	< 0.00100	0.0500	0.0457	91	0.0492	98	66-124	7	25	mg/kg	06.16.19 08:13	
Ethylbenzene	< 0.00100	0.0500	0.0467	93	0.0520	104	71-134	11	25	mg/kg	06.16.19 08:13	
m,p-Xylenes	< 0.00200	0.100	0.0927	93	0.103	103	69-128	11	25	mg/kg	06.16.19 08:13	
o-Xylene	< 0.00100	0.0500	0.0466	93	0.0510	102	72-131	9	25	mg/kg	06.16.19 08:13	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
Dibromofluoromethane	99		9	9		101		7	4-126	%	06.16.19 08:13	
1,2-Dichloroethane-D4	103		1	00		103		8	0-120	%	06.16.19 08:13	
Toluene-D8	99		1	02		98		7	3-132	%	06.16.19 08:13	
4-Bromofluorobenzene	90		1	04		102		5	8-152	%	06.16.19 08:13	

Analytical Method:	BTEX by SW 8260	С						F	rep Method	I: SW:	5035A	
Seq Number:	3092387		]	Matrix:	Soil				Date Prep	o: 06.1	6.19	
Parent Sample Id:	627723-002		MS San	nple Id:	627723-00	02 S		MS	SD Sample l	d: 627	723-002 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00105	0.0527	0.0412	78	0.0401	76	62-132	3	25	mg/kg	06.16.19 08:56	
Toluene	< 0.00105	0.0527	0.0420	80	0.0414	78	66-124	1	25	mg/kg	06.16.19 08:56	
Ethylbenzene	< 0.00105	0.0527	0.0445	84	0.0434	82	71-134	3	25	mg/kg	06.16.19 08:56	
m,p-Xylenes	< 0.00211	0.105	0.0880	84	0.0851	80	69-128	3	25	mg/kg	06.16.19 08:56	
o-Xylene	< 0.00105	0.0527	0.0424	80	0.0409	77	72-131	4	25	mg/kg	06.16.19 08:56	
Surrogate				1S Rec	MS Flag	MSI %Re			Limits	Units	Analysis Date	
Dibromofluoromethane			1	10		104		7	4-126	%	06.16.19 08:56	
1,2-Dichloroethane-D4			1	08		105		8	0-120	%	06.16.19 08:56	
Toluene-D8			9	97		97		7	3-132	%	06.16.19 08:56	
4-Bromofluorobenzene			1	03		106	1	5	8-152	%	06.16.19 08:56	

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

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ABORAT
<b>D</b> m

Setting the Standard since 1990 Stafford,Texas (281-240-4200)

# CHAIN OF CUSTODY

San Antonio, Texas (210-509-3334) Midland. Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

U000-204-12) SEXAL SEXAL	Midiand, I	Midiand, Texas (432-704-5251)							A
		www.xenco.com	Xeno	Xenco Quote #		Xenc	Xenco Job #	$\frac{1}{2}$	F
					Analytical Information	nformation	(		Matrix Codes
Client / Reporting Information		Project Information							
Company Name / Branch: KJ Environmental & Civil Engineering	Project Number: OWL051319D		M						W = Water
Compañy Address:	Project Name/Loca	re/Local	015						S = Soil/Sed/Solid GW =Ground Water
500 Moseley Rd Cross Road TX 76227		Bert Madera Well Pad 1RP-5498	oy 8						DW = Drinking Water
Email: Phone No:	Invoice To:		O) ti						SW = Surface water
Wsoderstrom@kje-US.com 640-387-0805			, MR		C			<u></u>	SL = Sludge OW =Ocean/Sea Water
Will Sodderstrom	PO Number:		R0,	с					WI = Wipe
Samplers's Name			DF	60				<u>-1</u>	O = OII WW= Waste Water
	Collection	Number	umber of preserved bottles	y 82			~1	02	A = Air
No. Field ID / Point of Collection	Sample Depth Date	Time Manin Manin Motiles ICI IaOH/Zn .cetate	22504 a0H aHS04 IE0H ONE	BTEX b	Benzer		11	41	! - -
1 65-01- 7 2.	5	5 5		<	_				
2 CS-02-F 2.	2 1	1205							
3 C5-03-F 2'	1	1312 1 2121							
4 しちーロイモス	2	1225							
5 CS-05-F2	2	1735							
6 CS-06-72	2	1345 1 1		_					
1 ms -20-57 L	-	1355							
\$ C5-08-5W 1'		1405		7					
· DUP-01					•				
10									
		Data Deliverable Information	3			Notes:	2		
		Level II Std QC	Level IV (Full Data Pkg /raw data)	/ data)		194	0	2MP-01	
Next Day EMERGENCY		Level III Std QC+ Forms	TRRP Level IV			Lu	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	7	
2 Day EMERGENCY Contract TAT		Level 3 (CLP Forms)	UST / RG -411			2426	5 77	4	
3 Day EMERGENCY		TRRP Checklist			-	-			
TAT Starts Day received by Lab, if received by 5:00 pm	md ow				FE	ED-EX / UPS: Tracking #	Fracking #		
ha and a sampler a	Date fime:	Date Films: Received By By By By Refinquished By:	Relinquished By:		Date Time:	Rec	Received By:		
Relinquished by:	Date Time!	Received by:	Relinquished By:		Date Time:	Rec	Received By:		
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Prese	Preserved where applicable	plicable	On Ice	Cooler Temp	D Thermo. Corr. Factor
Notice: Volta: Sphature of this document and relinquisiment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be inviced at 5.6 re-sample These terms	titutes a valid purchase order s beyond the control of Xenc	r from client company to Xenco, its affiliates and sub 20. A minimum charge of \$75 will be applied to each	bcontractors. It assigns standard terms proiect. Xenco's liability will be limited	and condi	ons of service.	Xenco will be lia	ble only for the co	st of samples and sh	hall not assume any responsibility for any

will be enforced unless previously negotiated under a fully executed client contract.

Final 1.000

## **Inter-Office Shipment**

#### IOS Number : 41441

Date/Time	: 06.14.	2019 07:57	Created by:	Brianna Te	el	Please send report	to: Jessica Kra	amer		
Lab# From	n: <b>Midla</b>	and	Delivery Pri	iority:		Address:	1211 W. F	lorida Av	/e	
Lab# To:	Hous	ton	Air Bill No.	: 775481660	596	E-Mail:	jessica.krai	mer@xei	nco.com	
Sample Id	Matrix C	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	РМ	Analytes	Sign
627723-001	S (	CS-01-F 2'	06.13.2019 12:55	SW8260CBTEX	BTEX by SW 8260C	06.14.2019	06.27.2019	JKR	BZ BZME EBZ XYLENE	
627723-002	S C	CS-02-F 2'	06.13.2019 13:05	SW8260CBTEX	BTEX by SW 8260C	06.14.2019	06.27.2019	JKR	BZ BZME EBZ XYLENE	
627723-003	S C	CS-03-F 2'	06.13.2019 13:15	SW8260CBTEX	BTEX by SW 8260C	06.14.2019	06.27.2019	JKR	BZ BZME EBZ XYLENE	
627723-004	S C	CS-04-F 2'	06.13.2019 13:25	SW8260CBTEX	BTEX by SW 8260C	06.14.2019	06.27.2019	JKR	BZ BZME EBZ XYLENE	
627723-005	S C	CS-05-F 2'	06.13.2019 13:35	SW8260CBTEX	BTEX by SW 8260C	06.14.2019	06.27.2019	JKR	BZ BZME EBZ XYLENE	
627723-006	S C	CS-06-F 2'	06.13.2019 13:45	SW8260CBTEX	BTEX by SW 8260C	06.14.2019	06.27.2019	JKR	BZ BZME EBZ XYLENE	
627723-007	S C	CS-07-SW-1'	06.13.2019 13:55	SW8260CBTEX	BTEX by SW 8260C	06.14.2019	06.27.2019	JKR	BZ BZME EBZ XYLENE	
627723-008	S C	CS-08-SW-1'	06.13.2019 14:05	SW8260CBTEX	BTEX by SW 8260C	06.14.2019	06.27.2019	JKR	BZ BZME EBZ XYLENE	
627723-009	S <sup>1</sup>	Dup-01	06.13.2019 00:00	SW8260CBTEX	BTEX by SW 8260C	HOLD	06.27.2019	JKR	BZ BZME EBZ XYLENE	

Inter Office Shipment or Sample Comments:

Relinquished By:

ession framer

Jessica Kramer

Date Relinquished: 06.14.2019

Received By:

Ashly Kowalski

Date Received:

06.15.2019 10:00

Cooler Temperature: 0.2



#### **XENCO** Laboratories



#### Inter Office Report- Sample Receipt Checklist

Sent To: Houston IOS #: 41441

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Temperature Measuring device used : HOU-068

Sent By:	Brianna Teel	Date Sent:	06.14.2019 07.57 AM
Received By:	Ashly Kowalski	Date Received:	06.15.2019 10.00 AM

#### Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

**Corrective Action Taken:** 

Contact:

#### Nonconformance Documentation

Contacted by :

Date:

Checklist reviewed by:

Almk	

Ashly Kowalski

Date: 06.15.2019



# **XENCO** Laboratories NCO ATORIES Prelogin/Nonconformance Report- Sample Log-In



Client: KJ Environmental & Civil Engineering	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 06/13/2019 06:36:00 PM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 627723	Temperature Measuring device used : R8
Sample Recei	ot 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)?	Yes Xenco Stafford-BTEX
#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:

Date: 06/14/2019

Checklist reviewed by: Jession Vermer

Jessica Kramer

Date: 06/14/2019



Will Soderstrom

Bert Madera Well Pad 1RP-5498

**Contact:** 

**Project Location:** 

# Certificate of Analysis Summary 628179

KJ Environmental & Civil Engineering, Aubrey, TX



**Project Name: OWL Delineation** 

Date Received in Lab:Tue Jun-18-19 05:27 pmReport Date:20-JUN-19Project Manager:Jessica Kramer

	Lab Id:	628179-001			
Analysis Requested	Field Id:	BM-02			
Analysis Kequeslea	Depth:	4- ft			
	Matrix:	SOIL			
	Sampled:	Jun-18-19 14:41			
Chloride by EPA 300	Extracted:	Jun-19-19 15:50	Î		
	Analyzed:	Jun-19-19 17:23			
	Units/RL:	mg/kg RL			
Chloride		1240 5.02			

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

fession Vermer

Jessica Kramer Project Assistant

# Analytical Report 628179

for

**KJ Environmental & Civil Engineering** 

**Project Manager: Will Soderstrom** 

**OWL Delineation** 

## OWL051319D

## 20-JUN-19

Collected By: Client





## 1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429), North Carolina (483)



20-JUN-19



Project Manager: **Will Soderstrom KJ Environmental & Civil Engineering** 500 Moseley Rd Aubrey, TX 76227

Reference: XENCO Report No(s): **628179 OWL Delineation** Project Address: Bert Madera Well Pad 1RP-5498

## Will Soderstrom:

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) 628179. 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. 628179 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,

Jessica Vramer

Jessica Kramer Project Assistant

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



# Sample Cross Reference 628179



# KJ Environmental & Civil Engineering, Aubrey, TX

**OWL** Delineation

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BM-02	S	06-18-19 14:41	4 ft	628179-001



# CASE NARRATIVE

Client Name: KJ Environmental & Civil Engineering Project Name: OWL Delineation

Project ID:OWL051319DWork Order Number(s):628179

Report Date: 20-JUN-19 Date Received: 06/18/2019

## Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



# **Certificate of Analytical Results 628179**



# KJ Environmental & Civil Engineering, Aubrey, TX

**OWL** Delineation

Sample Id: Lab Sample I	<b>BM-02</b> d: 628179-001		Matrix: Date Colle	Soil ccted: 06.18.19 14.41		Date Received:06 Sample Depth: 4		.7
Analytical M	ethod: Chloride by EPA	300				Prep Method: E3	300P	
Tech:	CHE					% Moisture:		
Analyst:	CHE		Date Prep:	06.19.19 15.50		Basis: W	et Weight	
Seq Number:	3092944							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	1240	5.02	mg/kg	06.19.19 17.23		1



# **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.
- RL Reporting Limit
- MDL Method Detection LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labor	ratory 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 628179

# KJ Environmental & Civil Engineering

**OWL** Delineation

Analytical Method:	Chloride by EPA 30	)0						Pr	ep Metho	d: E30	OP	
Seq Number:	3092944			Matrix:	Solid				Date Pre	ep: 06.1	9.19	
MB Sample Id:	7680338-1-BLK		LCS Sar	nple Id:	7680338-	1-BKS		LCSI	O Sample	Id: 7680	)338-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD ]	RPD Limi	t Units	Analysis Date	Flag
Chloride	< 5.00	250	250	100	251	100	90-110	0	20	mg/kg	06.19.19 16:44	

Analytical Method:	Chloride by EPA 30	)0						Pr	ep Metho	d: E30	0P	
Seq Number:	3092944			Matrix:	Soil				Date Pre	p: 06.1	9.19	
Parent Sample Id:	628030-008		MS Sar	nple Id:	628030-00	08 S		MSI	O Sample	Id: 628	030-008 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD I	RPD Limi	t Units	Analysis Date	Flag
Chloride	21.1	250	280	104	279	103	90-110	0	20	mg/kg	06.19.19 16:59	

Analytical Method:	Chloride by EPA 30	)0						P	rep Metho	od: E30	OP 90	
Seq Number:	3092944			Matrix:	Soil				Date Pr	ep: 06.1	9.19	
Parent Sample Id:	628181-002		MS Sar	nple Id:	628181-00	)2 S		MS	D Sample	e Id: 628	181-002 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	<4.96	248	259	104	257	104	90-110	1	20	mg/kg	06.19.19 18:07	

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

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Setting the Standard since 1990 Stafford,Texas (281-240-4200)

# CHAIN OF CUSTODY

Page Of

San Antonio, Texas (210-509-3334) Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

analyzed will be invoiced at some any responsibility for any	will be liable only for the cost a es received by Xenco but not a	samples. Any sample	the cost of	nited to t	ty will be lin	t. Xenco's liabi	to each proje	will be applied	charge of \$75	o. A minimum i	ontrol of Xenc	beyond the c	ecuted client contra	Client if such loses are di regotiated under a fully ex	enforced unless previously r	will be e
5 Cooler Temp, Thermo. Corr. Factor Notice Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco. Its affiliates and subcontrances. It assists reserved writere applicable			leselve			intore It assists	and subcontr	o. Its affiliate	mpany to Xen	5 from client cor	Irchase order	tutes a valid p	It of samples const	cument and relinquishmer	Notice: Signature of this do	Notice:
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						TRRP Level IV		+ Forms	Level III Std QC+ Forms	Lev			J7 Day TAT			
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WW= Waste Water A = Air		nzene by 00 (Chlor	EX by 82	H (GRO,		DH Served	DH/Zn Zintate D3 21		#		Collection	Sample		Field ID / Point of Collection	Field	No
0 = 01				DF											oalfipiers s Name	Calify
OW =Ocean/Sea Water WI = Wipe				RO,			542	L R	101/25		PO Number:			Will Sodderstrom		0
SL = Sludge				MR		J	, , , 10	SS T	Pueston, King	Prest	028		640-387-0805		Wsoderstrom@kje-US.com Project Contact:	Proiec
P = Product SW = Surface water				C) b		~	Phillip Sanders	dui ind	ath	'Ş	Invoice To:		Phone No:			
GW =Ground Water DW = Drinking Water				y 80			0-5498	ell Pad 1R	Bert Madera Well Pad 1RP-5498	Bert				d TX 76227	500 Moseley Rd Cross Road TX 76227	500 N
S = Soil/Sed/Solid				15						ne/Locat	Project Name/Local				Company Address:	Compa
W = Water				M							Project Number: 0WL051319D			Engineering	KJ Environmental & Civil Engineering	K E
Matrix Codes				-				ion	Project Information	Proj				Iformation	Client / Reporting Information	
	mation	Analytical Information												-	2	
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Final 1.000



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



Client: KJ Environmental & Civil Engineering	Acceptable Temperature Range: 0 - 6 deg	с
Date/ Time Received: 06/18/2019 05:27:00 PM	Air and Metal samples Acceptable Range:	
Work Order #: 628179	Temperature Measuring device used : R8	
Sample Recei	pt Checklist Comments	
#1 *Temperature of cooler(s)?	8.3	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes Cooling in prog	ress
#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:

Date: 06/19/2019

Checklist reviewed by: fession Kramer

Jessica Kramer

Date: 06/19/2019

# APPENDIX G

NMOCD Approved C-141 Form

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

State of New Mexico Energy Minerals and Natural Resources Department

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

)

Incident ID	NDHR1914435909
District RP	1RP-5498
Facility ID	fDHR1914435624
Application ID	pDHR1914435194

# **Release Notification**

# **Responsible Party**

Responsible Party OWL SWD Operating, LLC	OGRID				
Contact Name Mr. Phillip Sanders	Contact Telephone 210-906-3551				
Contact email psanders@oilfieldwaterlogistics.com	Incident # (assigned by OCD) NDHR1914435909				
Contact mailing address 8201 Preston Road, Suite 520, Dallas, Texas 75225					

# **Location of Release Source**

Latitude 32.21212184

Longitude -103.46117581 (NAD 83 in decimal degrees to 5 decimal places)

Site Name Bert Madera	Site Type <sub>SWD</sub>
Date Release Discovered   5/11/19 14:15 PM	API# (if applicable)

Unit Letter	Section	Township	Range	County
M and N	15	24S	34E	Lea County

Surface Owner: State Federal Tribal Private (Name: Bert Madera

# Nature and Volume of Release

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

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
X Produced Water	Volume Released (bbls) 40 BBLs	Volume Recovered (bbls) None
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes X No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Desander caught on fire and exploded resulting in the release of produced water. Please see attached OCD GIS map for the approximate spill path.

Page 2

# State of New Mexico Oil Conservation Division

Incident ID	NDHR1914435909
District RP	1RP-5498
Facility ID	fDHR1914435624
Application ID	pDHR1914435194

Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?
release as defined by	
19.15.29.7(A) NMAC?	Yes; release was greater than 25 BBLs
XYes No	
If YES, was immediate n	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, William	Soderstrom, with KJ Environmental (KJE), called and left a voicemail with Jim Griswold, NMOCD, in the
	office; spoke via telephone to Jim Amos in the Carlsbad office and described what happened. KJE submitted
C-141 form el	ectronically to Jim Amos and EMNRD-OCD-District1spills@state.nm.us.
	Initial Response
The responsible	party must undertake the following actions immediately unless they could create a safety hazard that would result in injury
$\overline{\mathbf{X}}$ The source of the relation	ease has been stopped.
	is been secured to protect human health and the environment.
X Released materials ha	ave been contained via the use of berms or dikes, absorbent pads, or other containment devices.
$\mathbf{X}$ All free liquids and re	ecoverable materials have been removed and managed appropriately.
If all the actions describe	d above have <u>not</u> been undertaken, explain why:
N/A	
IN/A	
D. 10 15 20 9 D. (4) NIV	
	IAC the responsible party may commence remediation immediately after discovery of a release. If remediation a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred
0 1	a narrative of actions to date. In remediat crioits have been successfully completed of in the release occurred in tarea (see $19.15.29.11(A)(5)(a)$ NMAC), please attach all information needed for closure evaluation.
	rmation given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and
	required to report and/or file certain release notifications and perform corrective actions for releases which may endanger
public health or the environment	nent. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have
	ate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In
addition, OCD acceptance of and/or regulations.	f a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws
° PL	Safaty Director
Printed Name:	Title: Safety Director
Signature:	Title: Safety Director Date: 5/16/2019
email: psanders@oilfie	
OCD Only	
Received by: <u>Dylan</u>	<b>Rose-Coss</b> Date: 05/24/2019

# **APPENDIX H**

New Mexico Well Logs



# New Mexico Office of the State Engineer Point of Diversion Summary

	(qua	(quarters are smallest to largest)				(NAD83 UTM in meters)			
Well Tag POI	) Number	Q64	Q16 Q	4 Sec	e Tws	Rng	Х	Y	
C (	3943 POD1	2	4 2	2 21	24S	34E	644523	3564266 🌍	
Driller License:	1737	Driller	Comp	any:	NO	T FOR I	HIRE AT T	HIS TIME	
Driller Name:	JUSTIN MULLINS	5							
Drill Start Date:	04/21/2016	Drill F	'inish D	ate:	04	4/24/201	16 <b>Pl</b>	ug Date:	
Log File Date:	04/25/2016	PCW	PCW Rcv Date:				So	urce:	Shallow
Pump Type:		Pipe Discharge Size			:		Es	timated Yield:	5 GPM
Casing Size:	6.00	Depth	Depth Well: 610 feet			t Depth Water:		431 feet	
wat	er Bearing Stratific	ations:	]	Гор	Bottom	Desci	ription		
				39	431	Sands	stone/Grave	/Conglomerate	
X	Casing Perfor	rations:	]	Гор	Bottom				
				420	480				

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

6/26/19 1:21 PM

POINT OF DIVERSION SUMMARY



#### O F F L O F $\sim$ - - -

Coordinates <u>UTM - NAD 83 (m) - Zone 13</u> Easting 645372.800 Northing 3564694.600 <u>State Plane - NAD 83 (f) - Zone E</u> Easting 812220.862 Northing 441033.608 <u>Degrees Minutes Seconds</u> Latitude 32 : 12 : 34.019376 Langitude 103 : 27 : 37 034380	POD Information File Number: C-04303-POD1 Owner: ENERGY TRANSFER Permit Use: NoData POD Status: PEN Permit Status: PMT	OFFICE OF THE STATE 1:18,056 	ENGINEER N Author: Purpose: DOM 7/17/2019	Spatial Information OSE Administrative Area: District 2 County: Lea Groundwater Basin: Carlsbad Abstract Area:Carlsbad Carlsbad Underground Basin Sub-Basin: Landreth-Monumnet Draws Land Grant: Not in Land Grant <u>Restrictions:</u> NA
Longitude -103 : 27 : 27.034280 Location pulled from POD Search Image Information Source: DigitalGlobe Date: 9/19/2016 Resolution (m): 0.5 Accuracy (m): 10.2	<ul> <li>0.5 Miles Buffer</li> <li>Selected POD</li> <li>Milepost - 1 Mile Intervals</li> </ul>			PLSS Description NWNWNWNE Qtr of Sec 22 of 0245 034E Derived from CADNSDI- Qtr Sec. locations are calculated and are only approximations

# **APPENDIX I**

Environmental Professional's Credentials

# William Soderstrom

500 Moseley Road Cross Roads, Texas 76225 (405) 258-8623 WSoderstrom@kje-us.com

## WORK EXPERIENCE

## Remediation Project Manager –Environmental Department KJ Environmental Management, Inc. – Denton, TX

 Managed and reviewed Phase I Environmental Site Assessments (ESAs) and Limited Phase II ESAs for active and historical service stations, dry cleaners, commercial and retail properties, and vacant or undeveloped land throughout New Mexico, Oklahoma and Texas utilizing hand auger equipment, truck-mounted hollow-stem augers (HSA), and direct-push technologies (Geoprobe).

• Provided professional environmental consulting services to individual businesses, real estate developers (commercial, industrial, and multi- family residential), financial institutions, manufacturing facilities and corporate representatives to ensure compliance with the United States Environmental Protection Agency (USEPA), Oklahoma Corporation Commission (OCC), Oklahoma Department of Environmental Quality (ODEQ) and Texas Commission on Environmental Quality (TCEQ) rules and regulations.

- Supervised and coordinated the remediation of various produced water releases ranging from 95 barrels to 12,000 barrels in conjunction with state regulatory agencies including the Railroad Commission of Texas, TCEQ Emergency Response, New Mexico Oil Conservation Division, New Mexico Bureau of Land Management, New Mexico State Land Office, and the United States Army Corps of Engineers.
- Enrolled and managed chemical manufacturing and industrial facilities into the TCEQ Voluntary Cleanup Program (VCP), Corrective Action (CA) and Municipal Setting Designation (MSD) regulatory programs throughout north Texas.
- Managed the characterization and remediation of exploration and production (E&P) exempt waste for multiple oil and gas companies in south and west Texas.

### Assistant Project Manager –Remediation Division The VERTEX Companies, Inc. – Irving, TX

- Conducted Phase I ESAs and Limited Phase II ESAs for active and historical service stations, dry cleaners, commercial and retail properties, and vacant or undeveloped land throughout Alabama, Arizona, Arkansas, California, Georgia, Kansas, Louisiana, Mississippi, Missouri, New Mexico, Oklahoma, Oregon, Tennessee, and Texas utilizing hand auger equipment, truck-mounted HSAs, and direct push technologies (Geoprobe).
- Performed a Phase II ESA at an active bulk petroleum storage facility in Alabama to delineate impacted soils for a potential real estate transaction.
- Provided consulting services to individual businesses, real estate developers (commercial, industrial, and multifamily residential), financial institutions, and corporate representatives to ensure compliance with Alabama Department of Environmental Management (ADEM), Arkansas Department of Environmental Quality (ADEQ), Kansas Department of Health and Environment (KDHE), Missouri Department of Natural Resources (MDNR), OCC, ODEQ, Oregon Department of Environmental Quality (Oregon DEQ), and TCEQ rules and regulations.
- Screened impacted soils within Operable Unit 1 (OU-1) and coordinated the characterization, transportation, and disposal of approximately 7,500 cubic yards of soil to approved ClassI and ClassI and fill.
- Provided technical support for the VCP, MSD, and TCEQ Subchapter T: Use of Land Over Closed Municipal Solid Waste (MSW) Landfills throughout the Dallas-Fort Worth Metroplex.
- Installed and sampled soil vapor probes to adhere to TCEQ Subchapter T reporting limits for MSW Landfills in Dallas.
- Operated as team leader for the removal, disposal, characterization, and transportation of ghost storage tanks, aboveground storage tanks (ASTs), underground storage tanks (USTs) and stockpiled backfill at former and current gas stations, tank batteries, and manufacturing facilities throughout the Dallas-Fort Worth Metroplex and Oklahoma.
- Provided construction oversight for the installation and verification of a low-profile ventilation system and vapor mitigation system at various multi-family complexes for sub-grade areas and first floor living spaces.

## Staff Scientist – Real Estate Division

## W&M Environmental Group, LLC - Plano, TX

- Conducted Phase I ESAs and Limited Phase II Investigations for active and historical manufacturing facilities, active and historical service stations, commercial and retail properties, dry cleaners, and vacant or undeveloped land throughout Texas utilizing hand auger equipment, truck-mounted HSA, and direct push technologies (Geoprobe).
- Provided consulting services to real estate developers (commercial and multi-family residential), financial institutions, and corporate representatives to ensure compliance with the ODEQ, OCC, and TCEQ.
- Provided technical support for MSD, VCP, Affected Property Assessment Report (APAR), and Innocent Owner/Operator Program (IOP) applications for a former service station and auto repair shop.
- Provided emergency response to multiple pipeline and tank battery spills in Texas and Oklahoma and collected confirmation soil samples to delineate vertical and horizontal extent.

09/2013 - 07/2015

07/2015 - 07/2018

07/2018 - Present

- Acted as field team leader for the removal, disposal, and transportation of underground storage tanks at various sites throughout the Dallas-Fort Worth Metroplex.
- Acted as field team leader for the collection of pond sediment samples to delineate heavy metals and polychlorinated biphenyls (PCBs) at a former Naval Air Station.
- Installed and sampled soil vapor probes at historical dry cleaners, leaking petroleum storage tank sites, auto body repair shops and commercial properties throughout Texas.
- Performed Stormwater Pollution Prevention Plan (SWPPP) site reconnaissance for various manufacturing facilities in the Dallas-Fort Worth Metroplex.

## Staff Environmental Scientist –Environmental Department Terracon Consultants, Inc – Oklahoma City, OK

06/2010 - 09/2013

- Conducted Limited Phase II Environmental Site Assessments for active manufacturing facilities, historical dry cleaners, service stations, and vacant or undeveloped land throughout Oklahoma utilizing hand auger equipment, airrotary drilling, and truck-mounted HSA.
- Provided emergency response to brine water spill and screened approximately 2,000 cubic yards of soil for off-site disposal.
- Provided consulting services to real estate developers, financial institutions, and corporate representatives to ensure compliance with the ODEQ and OCC.
- Acted as field team leader for screening impacted soils and coordinating the management, transportation, and disposal of approximately 28,000 cubic yards of impacted soil to land-farm for treatment.
- Served as field team professional on the investigation and plume delineation of two dry-cleaner sites within the ODEQ VCP and Brownfields program.
- Provided support for state environmental regulatory activities regarding Concentrated Animal Feeding Operation (CAFO) permits of numerous swine facilities in Oklahoma and Texas.
- Completed due diligence services for Oklahoma based oil/gas company to assess the potential impact to threatened or endangered species, wetlands, and potential locations of archeological or cultural significance throughout Oklahoma.

## **PROFESSIONAL DEVELOPMENT**

•	40-Hour HAZWOPER 10-Hour OSHA Outreach Training Program – Construction	05/2010 08/2015
•	Geo-Seal Vapor Intrusion Barrier - Certified Inspector	03/2018
•	First AID CPR – AED – American Heart Association	04/2018
•	8-Hour WAZWOPER Refresher Training	08/2018

## EDUCATIONAL BACKGROUND

Bachelor of Science, Environmental Sciences Option: Natural Resources Minor: Soil Science Oklahoma State University, Stillwater, OK May 2010

# **Dena Marie Vandenberg, REM, LEED AP** ENVIRONMENTAL PROFESSIONAL

## WORK HISTORY

## **Director of Environmental Services**

KJ Environmental Management, Inc.

June 2011 - Present (8 years)

I am currently working as the Director of Environmental Services at KJ Environmental. I have fifteen years of experience as an environmental professional in consulting. I lead a team of Engineers and Scientists to complete projects for a variety of industries, while ensuring the delivery of the highest quality work product, customer service, and professionalism.

## **Project Manager**

KJ Environmental Management, Inc.

April 2010 – June 2011 (1 year 3 months)

When I began working at KJ Environmental in Denton, Texas as a Project Manager, I provided regulatory compliance services for various industries including oil and gas storage and trucking facilities, sand and cement handling facilities, manufacturing facilities, and municipal agencies. My areas of expertise included project management, construction and industrial storm water pollution prevention plans (SWPPP), NPDES/TPDES permit applications, management of PST tank pulls, oil pollution prevention compliance (SPCC), Permit-By-Rule (PBR) Applications, New Source Review (NSR) Applications, Barnett Shale Phase I & Phase II Special Emissions Inventories, Saltwater Disposal Well Permitting, Underground Injection Control Permitting, TCEQ Public Water System compliance, drinking water, storm water, ground water, and waste sampling, asbestos sampling, mold assessments, radon testing, lead-based paint sampling, lead in drinking water sampling, Phase I Environmental Site Assessments, Limited Phase II Environmental Site Assessments, noise monitoring, and brownfield redevelopment. I have also served as the Environmental Professional on record and designated expert for oil & gas production and commercial saltwater disposal clients in handling multiple produced water spill investigations and remediation activities completed under the jurisdiction of the Railroad Commission of Texas.

## **Environmental Scientist**

<u>Terracon</u>

Privately Held; 1001-5000 employees; Civil Engineering industry April 2006 – February 2010 (3 years 11 months)

At Terracon, I conducted hundreds of Phase I ESAs for various types of properties from vacant land to industrial/manufacturing facilities and gas stations. I also did regulatory compliance consulting for oil & gas clients, industrial/manufacturing facilities, and municipalities. I completed SWPPPs and SPCCs, conducted storm water sampling, and operated a public water system on behalf of a municipality. I became a licensed Asbestos Inspector, Mold Assessment Technician, and LEED Accredited Professional.

## **Environmental Geologist**

<u>Cirrus Associates</u> March 2006 – March 2006 (1 month)

At Cirrus Associates, I acted as a contract employee on a VCP project for a client in Odessa, Texas. I conducted sampling of groundwater monitoring wells using low-flow sampling techniques.

## Environmental Scientist Delta Environmental

August 2004 – December 2005 (1 year 5 months)

At Delta Environmental, I performed public drinking water sampling under the TCEQ contract. I collected over 3,000 drinking water samples. I was recognized as one of the top 5 samplers in the state for productivity and was trusted with the responsibility of training other samplers associated with the project. In addition, I conducted several ESAs to obtain more experience, when time would allow.

## **EDUCATION**

## University of North Texas Bachelor of Science in Geography with a focus in Earth Science, Geology Minor 1999 – 2004

Activities and Societies: Vice Chairman of the Planning & Zoning Commission for the Town of Providence Village, Texas Delta Zeta Sorority

# ADDITIONAL INFORMATION

# **Professional Education & Certifications:**

National Registry of Environmental Professionals (NREP) Registered Environmental Manager (REM) No. 832509140161111 OSHA 29 CFR 1910.120 HAZWOPER 40 HR Certification EPA Accredited Asbestos Inspector TDSHS License Asbestos Inspector (License No. 602837) TDSHS Licensed Mold Assessment Technician (License No. MAT1011) TCEQ Class C Water Distribution Operator (License No. WD0007445) Leadership in Energy and Environmental Design (LEED) Accredited Professional Texas Commission on Environmental Quality (TCEQ) Certified Water Sampler under the Safe Drinking Water Act and State Regulations (ID No. 2005-006) ORIS-Enviromod University- AERMOD Modeling For Permits Certification Certified NORM Surveyor

## Affiliations:

The North Texas Association of Environmental Professionals Society of Texas Environmental Professionals Association of American Geographers U.S. Green Building Council

# CONTACT INFORMATION

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