Spill Delineation Report & Remediation Plan

Version 2.0

May 11, 2018

Oilfield Water Logistics (OWL) Produced Water Pipeline Release
Nearby Unit Letter H, Section 32, T24S, R35E, Lea County, New Mexico – Case No. 1RP- 4820

INFORMATION ONLY

Prepared For:

Mr. Phillip Sanders
Oilfield Water Logistics
8214 Westchester Drive, Suite 850
Dallas, Texas 75225

New Mexico Energy Minerals and Natural Resources Department (EMNRD)
Oil Conservation Division (OCD)
Ms. Olivia Yu
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

Prepared By:

KJE
ENVIRONMENTAL & CIVIL ENGINEERING

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

ENVIRONMENTAL & CIVIL ENGINEERING
500 Moseley Road
Cross Roads, Texas 76227
Phone: 940-387-0805
Fax: 940-387-0830

May 11, 2018

Mr. Phillip Sanders
Oilfield Water Logistics
8214 Westchester Drive, Suite 850
Dallas, Texas 75225

RE: **Soil Delineation Report and Remediation Workplan Version 2.0: Oilfield Water Logistics (OWL) Produced Water Pipeline Nearby Unit Letter H, Section 32, T24S, R35E, Lea County, New Mexico – Case No. 1RP- 4820**

Dear Mr. Sanders:

KJ Environmental Mgt., Inc. (KJE) is pleased to submit this Soil Delineation Report and Remediation Workplan for the Produced Water Pipeline Release located 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,

James L. Fox, CNRP
Environmental Project Manager

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

Table of Contents

1.0 Summary

KJ Environmental Mgt., Inc. (KJE), was retained by Oilfield Water Logistics (OWL) to complete certain delineation activities for a produced water pipeline release to vacant land situated approximately 11 miles northwest of Jal in Lea County, New Mexico. The results of the delineation activities are summarized as follows:

- On September 14, 2017, KJE was notified by Mr. Phillip Sanders, Safety Director with OWL, regarding a spill occurrence 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 spill was assigned remediation case number 1RP-4820. Soil delineation activities included the advancement of 14 soil borings to depths ranging from zero to 16 feet below ground surface (bgs). Analytical soil data identified chloride at concentrations above the NMOCD approved criteria. However, chloride concentrations exceeding the NMOCD approved criteria have been vertically and horizontally delineated. Details regarding the spill delineation activities and remediation plan are further summarized herein.

2.0 Introduction

On September 14, 2017, KJE was provided notification by Mr. Phillip Sanders, Safety Director with OWL, regarding a spill occurrence over a relatively short time frame. KJE provided further notification to the New Mexico Oil Conservation Division (NMOCD), part of the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), and SLO (land owner) of the spill at 13:30 on September 14, 2017. It was determined that 25 barrels of produced water was released during the spill event of which 10 barrels were recovered. KJE submitted the NMOCD Form C-141 – Release Notification and Corrective Action report to OCD on September 21, 2017, for review. A response received from the NMOCD, indicated that the incident was assigned remediation case number 1RP-4820. The general view of the spill is illustrated in Appendix A on Figure A1.

Subsequent to the NMOCD directive to complete division-approved corrective action, at the request of the NMOCD, KJE completed a delineation workplan detailing the collection of soil samples for analysis to delineate the vertical and horizontal extent of produced water impacted soil. The workplan was submitted by KJE and administratively approved by Ms. Olivia Yu on November 30, 2017. The NMOCD approved Work Plan for the Characterization of Impacts is located in Appendix G of this report.

As such, following approval of the characterization of impacts workplan, from January 17 through January 23, 2018, fourteen (14) soil borings were advanced within the spill area, one of which (soil boring BG) was advanced outside of the impacted soil area, in close proximity to the spill area, in an effort to confirm background soil constituents. Soil samples collected were transferred to an accredited laboratory and analyzed for benzene, toluene, ethylbenzene, and

xylenes (BTEX), extended range total petroleum hydrocarbons (TPH), and chloride. Implementation of the characterization of impacts workplan is further detailed below.

3.0 Environmental Assessment Activities

3.1 Delineation Activities

In accordance with the NMOCD Approved Work Plan for the Characterization of Impacts, following the approval of a Right of Entry Permit by the New Mexico Land Office[1], KJE personnel observed the drilling subcontractor advance 14 soil borings (SB-1 through SB-14) within the soil impact area and one soil boring (BG) within the area in close proximity, but outside of the spill area in an attempt to delineate the extent of soil impact and potential groundwater impacts. The locations of the soil borings were defined by the proximity to the pipelines and associated setback areas and are depicted on the Overview of the Spill Area and Boring Location Map in Appendix A.

The subcontracted driller advanced the borings via flight augers to depths ranging from zero to 16 feet below ground surface (bgs) with the intent to delineate the vertical area of impact, ten feet beyond the known area of impact[2], per NMOCD directives. As indicated above, in lieu of groundwater, soil samples were collected from ten feet below the known area of soil impact within SB-6. Soil collected from SB-6 exhibited concentrations of chloride (1,070 mg/kg at 4 to 6 feet bgs) above the NMOCD approved criteria. As such, this soil boring was selected for further vertical delineation in an effort to identify potential groundwater impacts. Based on the analytical data, chloride concentrations were first identified below the NMOCD specified criteria at a depth of six feet bgs (454 mg/kg). Therefore, KJE advanced the boring to 16 feet bgs. Groundwater was not encountered during the drilling activities; therefore, groundwater was not developed nor sampled during the sampling event.

Field screening for chloride concentrations and soil conductivity was conducted using a calibrated Hanna HI993310 soil conductivity meter. Field screening for Volatile Organic Compounds (VOCs) was conducted using a calibrated Photoionization Detector (PID) (Model RAE MINIRAE Lite 0-5K ppm) to screen for the highest readings from each of the borings. Photo documentation of field activities is included in Appendix C. The soil boring lithology and field screening data table (Table 1) is included in Appendix B for review. Due to the uniformity in lithology, representative boring logs are also provided in Appendix D.

[1] The spill area encroached upon the New Mexico Department of Transportation Easement. As such, KJE acquired a Right of Entry Permit to conduct characterization and delineation activities within the easement.
[2] Known area of impact is considered to be from the surface to the vertical depth of the first soil sample with confirmed chloride concentrations below the NMOCD approved criteria of 600 ppm, since TPH and BTEX were not detected above criteria in any of the soil samples collected.

3.2 Deviations from the Scope

Initial analytical data from soil borings SB2 and SB5 indicated that the vertical delineation distance from soil below the permissible chloride levels, was less than the NMOCD dictated ten feet. Subsequently, during a phone conference on February 28, 2018, with the NMOCD, Ms. Yu provided verbal confirmation that the soil borings did not require additional delineation. As such, delineation of the spill has been completed.

4.0 Soil/Groundwater Sample Collection/Handling Procedures

Soil samples were collected based on field indicators, proximity to the boring termination depths, or depth of potential impact as noted above, and select samples were collected in four ounce laboratory supplied glass containers for laboratory analysis. The collected soil samples were placed in laboratory-supplied containers, labeled, placed in an insulated container with ice, providing a 4^{o}C environment for sufficient preservation until delivery to Xenco Laboratories (a third-party, independent, and licensed environmental laboratory in Midland, Texas) 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. Before and after installation of each of the soil borings, the drilling augers were decontaminated.

A representative amount of samples were collected for quality control/ quality assurance purposes. These samples are duplicate samples and referenced as DUP. The soil samples were analyzed for BTEX by SW-846 Method 8021B, Extended-Range TPH by SW-846 Method 8015 modified with extended range, and/ or Chlorides by EPA Method 300. These analytical methods are the EPA, NMOCD, and industry-approved standards used to determine the potential for soil contamination.

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

5.0 Summary of Analytical Results

Soil Action Limits

The NMOCD required delineation of BTEX, Extended-Range TPH, and Chlorides for the spill area. Published values for BTEX and TPH were obtained from the NMOCD document "Guidelines for Remediation of Leaks, Spills, and Releases, 1993". Horizontal and vertical delineation values were determined to be 10 ppm Benzene, 50 ppm BTEX, and 1,000 ppm TPH since a surface water body (Antelope Draw) was identified approximately 750 feet southwest of the Site. Written directives issued by NMOCD representative Ms. Olivia Yu indicated that chloride impacted soil was to be vertically and horizontally delineated to 600 ppm, with vertical delineation of soil below the 600 ppm mandated criteria to be maintained ten feet beyond the first soil sample indicative of soil below the mandated criteria. See Figure A1 in

Appendix A for soil borings locations and areas of exceedances. Analytical results are included on Table 1 in Appendix B for review. Laboratory reports are also included in Appendix E.

Soil Delineation – Analytical Data

Analytical soil data did not identify concentrations of BTEX or TPH above the NMOCD approved criteria. Analytical soil data identified Chloride at concentrations up to 2,680 mg/kg (ppm); however, these concentrations were delineated to below 600 ppm, four to ten feet beyond the known area of impact. As noted above, soil boring locations were driven by proximity to the pipelines and associated setback areas. Analytical data is included on Table 1 in Appendix B for review.

Based on the analytical data, soil above the applicable criteria has been identified at depths in the Spill Area ranging from zero to six feet bgs. The estimated area of impacted soil is approximately 0.19 acres (8,169 square feet), and the estimated area of contaminated soil contour line is illustrated on Figure A2 in Appendix A. Based on the pipelines and associated buffer zones in the area, the estimated volume of accessible impacted soil in the Spill Area is 262 cubic yards. Based on the laboratory analytical results, delineation of impacted soils has been completed.

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.

Groundwater

Groundwater was not encountered in the soil borings advanced, 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 minimum depth to water for the water for water wells located in the same Township and Range as the release Site, was reported at 200 feet bgs. Additional review of available records indicated that the Site may be in an area with water present in the alluvial/ quaternary age formation overlaying the Triassic Chinle Formation, which may be associated with Antelope Draw. However, based on the analytical data, which explored soil borings to depths ranging from four to ten feet below the known areas of impact, potential groundwater impact was not anticipated. As such, there does not appear to be a complete exposure pathway to shallow groundwater. No use of groundwater is expected following Site remediation and Site remediation activities are not expected to encounter groundwater due to the depth of the groundwater at the Site. As such, KJE does not recommend further action regarding potential groundwater impact.

6.0 Risk Screening

6.1 Chemicals of Potential Concern

Chemicals of potential concern (COPCs) were initially identified as TPH, BTEX, and Chlorides. Following soil delineation activities and based on soil analytical data, TPH and BTEX have

been eliminated as COPCs. As such, chloride has been identified as the only COPC. Analytical data from soil borings SB2, SB5 and SB6 exhibited the only chloride concentrations above the NMOCD mandated criteria in the Spill Area and are included in Table 1 below. Concentrations were compared to the NMOCD Action Limits, Pit and Recycling Containment Closures, and the New Mexico Environmental Department (NMED) Soil Screening Levels issued December 2014 and July 2015.

Table 1: Analytical Data from Soil Borings

SPILL AREA							
Sample ID	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**	**BTEX**	**Chlorides**	**TPH**
SB2 (0'-2')	<0.00336 U	<0.00336 U	<0.00336 U	<0.00336 U	<0.00336 U	16.8	<15.0 U
SB2 (2'-4')	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	**2680**	<15.0 U
SB2 (4'-6')	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	**1220**	<15.0 U
SB2 (6'-8')	<0.00199 U	<0.00199 U	<0.00199 U	<0.00199 U	<0.00199 U	236	<15.0 U
SB2 (8'-10')	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	32.2	<15.0 U
SB2 (10'-11')	<0.00202 U	<0.00202 U	<0.00202 U	<0.00202 U	<0.00202 U	<4.99 U	<15.0 U
SB5 (0'-2')	<0.00332 U	<0.00332 U	<0.00332 U	<0.00332 U	<0.00332 U	**1330**	43.2
SB5 (2'-4')	<0.00202 U	<0.00202 U	<0.00202 U	<0.00202 U	<0.00202 U	**1580**	<15.0 U
SB5 (4'-6')	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	486	<15.0 U
SB5 (6'-8')	<0.00199 U	<0.00199 U	<0.00199 U	<0.00199 U	<0.00199 U	51.7	<15.0 U
SB5 (8'-10')	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	23.7	<15.0 U
SB6 (0'-2')	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<4.98 U	<15.0 U
SB6 (2'-4')	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	<0.00201 U	404	<15.0 U
SB6 (4'-6')	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	<0.00200 U	**1070**	<15.0 U
SB6 (6'-8')	<0.00199 U	<0.00199 U	<0.00199 U	<0.00199 U	<0.00199 U	454	<15.0 U
SB6 (8'-10')	<0.00330 U	<0.00330 U	<0.00330 U	<0.00330 U	<0.00330 U	121	<15.0 U
SB6 (10'-12')	<0.00198 U	<0.00198 U	<0.00198 U	<0.00198 U	<0.00198 U	540	<15.0 U
SB6 (12'-14')	<0.00338 U	<0.00338 U	<0.00338 U	<0.00338 U	<0.00338 U	162	<15.0 U
SB6 (14'-16')	<0.00346 U	<0.00346 U	<0.00346 U	<0.00346 U	<0.00346 U	420	<15.0 U
OCD Action Limits 1993 Guideline	10	-	-	-	50	Horiz. – 600 Vert. – 600	1,000
Action Limits and Closure Requirements Assumes Depth To Water is < 100 feet							

6.2 Exposure Pathways

Potential exposure pathways for the COPCs at the Site include ingestion and dermal contact with COPCs via soil, groundwater, and surface water. There currently are no vapor phase COPCs; therefore, soil gas is eliminated as a potential exposure pathway. Following remediation of onsite soils at the Site, there are expected to be no complete exposure pathways for ingestion or dermal contact with COPCs via soil, groundwater, and surface water. Each is discussed briefly below.

6.2.1 Soil

Following Site remediation, it is expected that there will be no complete exposure pathways to any remaining COPCs in soil at depth beneath the Site, with the exception of soil located within the pipeline easements and buffer zones. The potential exposure pathways to COPCs in soils are expected to occur during Site remediation when near-surface soils are disturbed. Those potential pathways include construction worker exposure to airborne dust, dermal contact with dust, and possible inadvertent ingestion. Measures to mitigate these potential

exposures will be addressed in the Health and Safety Plan (HASP). COPCs in soil within the pipeline easements and buffer zones do not have a potential exposure pathways as these soil areas are not allowed to be disturbed until the pipelines need to be replaced or repaired. Chloride impacted soil exceeding criteria will be managed in accordance with the HASP and applicable regulations.

6.2.2 Surface Water

There is currently no direct contact of surface water with impacted soil, and all surface water exits the Site as storm water. There is no surface water at the Site and, therefore, no pathway for exposure. Similarly, following Site remediation, it is expected that there will be no complete exposure pathway to surface water. During remediation, surface water is expected to percolate into Site soils; measures to mitigate surface run-off will be mitigated utilizing berms and poly-liners.

6.2.3 Groundwater

As discussed above, because the depth of potential impact has been explored and delineated for the spill area and groundwater was not encountered nor is groundwater a source of drinking water, there is no complete exposure pathway to shallow groundwater. No use of groundwater is expected following Site remediation. Site remediation activities are not expected to encounter groundwater due to the depth of the groundwater at the Site.

7.0 Photographs

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

8.0 Conclusions/Recommendations

KJE has concluded that the majority of the spill area has been delineated, and that there would be no beneficial outcome of installing additional soil borings in the spill area. KJE feels that we would only replicate analytical results from other nearby soil borings.

According to the records acquired from the New Mexico Office of the State Engineers database, it appears that there is at least 184 feet between the zones of impacted soil and groundwater. KJE feels that the chance of groundwater contamination from the impacted soil is highly unlikely.

OWL and KJE believe an in situ bioremediation option is a solution to remediating the affected soil at the spill site, including along pipelines that cannot be easily removed or replaced. KJE proposes that the impacted soil area be treated with a microbial solution (OrganaMax) in the areas where chlorides exceed 600 ppm to a depth of 4', as depicted in Figure A2. OrganaMax, originally a soil amendment for agriculture, is a natural formulation that includes aerobic and anaerobic species including bacillus, pseudomonas, azotobacter, azospirillus, rhizobium, and

proprietary species to symbiotically improve soil conditions. The microbes as well as the addition of humate (humic Acid) will improve soil conditions by:

- improving absorption of nutrients
- improving aeration of soils and moisture retention
- increasing activity / performance of microbes
- neutralizing soil pH
- reducing salinity
- encouraging root development
- loosening heavy, clay soils
- improving seed germination

During the treatment, it is important to maintain 50-70% soil moisture. This keeps the microbes mobile to reproduce and digest material. This task will be done by a continuous mist, sprinklers and/or drip irrigation. The area will be prepared by drilling 6" diameter injection holes to a depth of 60" along the length of the contaminated zone at 4' spacing. A slotted PVC pipe will be inserted and extend 4' above ground level to act as a reservoir for the microbial solution. Details of the mixture of microbes and humates are below:

- 1,000 gallons of fresh water
- 100 gallons of OrganaMax microbes
- 2 pounds of 95% humic acid
- The mixture is pumped into the injection piping to slowly drain and soak into contaminated areas
- Approximately 11,000 gallons of microbes/ humate solution (Two treatments of 5,500 gallons each) to effectively treat the contaminated area

This process shall be repeated approximately two weeks after the initial treatment to monitor and document remediation progress. Maintaining the soil moisture will depend on environmental conditions. To further maintain proper soil moisture, soil moisture sensors will be onsite during the remediation process. Based on dosing protocol and moisture parameters, the site is estimated to take 6-8 weeks to remediate, after which time KJE will conduct clearance sampling. Once the site has reached acceptable limits, disturbed areas will be reseeded with a BLM mix to reestablish growth; however, due to vegetative growth restrictions imposed by the pipeline owners, the easement will not be seeded.

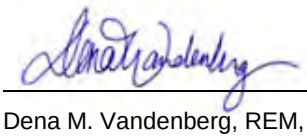
Based on review of available groundwater data, in conjunction with KJE's soil analytical data, KJE has opined that groundwater impact is unlikely; therefore, further action regarding groundwater is not recommmended.

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.

9.0 Qualifications of Environmental Professional

This is to certify that the Environmental Investigation that was completed at the produced water spill site located approximately 11 miles northwest of Jal in Lea County, New Mexico were conducted using EPA, NMOCD, and industry-approved standards/protocols. This field work was conducted from January 17 through 23, 2018 for OWL, and all field activities were completed under the supervision of Ms. Dena M. Vandenberg, REM, LEED AP. Mr. Ware's, Ms. Vandenberg's, and Mr. Fox's credentials are included in Appendix F for review.

10.0 Signature of Environmental Professional



May 11, 2018

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

Date

APPENDIX A

Figure A1 – Overview of the Spill Area and Boring Location Map
Figure A2 – Proposed Impacted Soil Bioremediation Areas Map

NOTES:
1. CONCENTRATIONS DEPICTED EXHIBITED CHLORIDE CONCENTRATIONS ABOVE 600 PPM. THE CONCENTRATIONS LISTED IDENTIFY THE FIRST SAMPLE INTERVAL THAT WAS BELOW CRITERIA AND THE LAST SAMPLE INTERVAL COLLECTED AT THE BORING. THE CONCENTRATIONS LISTED ARE IN PPM.
2. TPH AND BTEX DID NOT EXCEED APPLICABLE CRITERIA.
3. BING MAPS WAS USED AS AN UNDERLAY IMAGE FOR THIS MAP. (http://bing.com/maps)

LEGEND

RELEASE POINT
SOIL BORING (TOTAL: 14)
BACKGROUND SAMPLE
OWL SALTWATER LINE (WITH 10' BUFFER ON EACH SIDE)
GAS LINE (WITH 20' BUFFER ON EACH SIDE)
TEMPORARY FENCE

40 0 20 40
SCALE: 1" = 40'

N

REVISIONS:

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

KJE ENVIRONMENTAL & CIVIL ENGINEERING

PROPOSED IMPACTED SOIL BIOREMEDIATION AREAS MAP
OWL SWD OPERATING, LLC
LEA COUNTY, NEW MEXICO
UNIT H, SECTION 32, TOWNSHIP 24S, RANGE 35E
CASE NO. 1RP–4820

DATE: 5/10/2018

SHEET: B1

APPENDIX B

Table 1 – Field and Soil Analytical Data

Table 1: Field and Soil Analytical Data
OWL Produced Water Pipeline Release Nearby Unit Letter H, Section 32, T24S, R35E
Lea County, New Mexico
NMOCD Case No. 1RP-4820

Field Data							Laboratory Analytical Data			
Sample ID	Date Collected	GPS Coodrinates	Soil Type	Soil Color/Size	PID (PPM)	Chlorides (field screening)	Benzene	Total BTEX	Chlorides	Total TPH
							Action Limits			
							10 mg/kg	50 mg/kg	Horizontal: 600 mg/kg Vertical: 600 mg/kg	1,000 mg/kg
BG (0'-2')	1/17/2018	32.17672°, -103.38129°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	5	N/A	N/A	<9.92	N/A
BG (2'-4')	1/17/2018		SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	45	N/A	N/A	<9.98	N/A
BG (4'-6')	1/17/2018		SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	0	N/A	N/A	<9.84	N/A
BG (6'-8')	1/18/2018		SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	0	N/A	N/A	<9.96	N/A
SB1 (0'-2')	1/17/2018	32.176190°, -103.381190°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	0	N/A	N/A	<9.97	N/A
SB1 (2'-4')	1/17/2018		SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	0	N/A	N/A	<9.96	N/A
SB1 (4'-6')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	<9.94	N/A
SB1 (6'-8')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	<9.84	N/A
SB1 (8'-10')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	43.9	N/A
SB1 (10'-11.5')	1/17/2018		CS - Sandstone with sand stringers	Red/ Medium	0.0	0	N/A	N/A	31.2	N/A
SB2 (0'-2')	1/17/2018	32.176160°, -103.381290°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.6	10	<0.00336 U	<0.00336 U	16.8	<15.0 U
SB2 (2'-4')	1/17/2018		CE - Caliche	Grey/ Fine	0.3	650	<0.00200 U	<0.00200 U	2680	<15.0 U
SB2 (4'-6')	1/17/2018		CE - Caliche	Grey/ Fine	0.9	525	<0.00201 U	<0.00201 U	1220	<15.0 U
SB2 (6'-8')	1/17/2018		CE - Caliche	Grey/ Fine	1.0	10	<0.00199 U	<0.00199 U	236	<15.0 U
SB2 (8'-10')	1/17/2018		CE - Caliche	Grey/ Fine	0.9	5	<0.00201 U	<0.00201 U	32.2	<15.0 U
SB2 (10'-11')	1/17/2018		CS - Sandstone with sand stringers	Red/ Medium	0.0	0	<0.00202 U	<0.00202 U	<4.99 U	<15.0 U
SB3 (0'-2')	1/17/2018	32.17623°, -103.38147°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.3	0	N/A	N/A	<9.94	N/A
SB3 (2'-4')	1/17/2018		CE - Caliche	Grey/ Fine	0.2	0	N/A	N/A	<9.78	N/A
SB3 (4'-6')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	<9.8	N/A
SB3 (6'-8')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	<9.90	N/A
SB3 (8'-10')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	20.5	N/A
SB3 (10'-11')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	65.8	N/A
SB4 (0'-2')	1/17/2018	32.17602°, -103.38123°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	5	N/A	N/A	39.8	N/A
SB4 (2'-4')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	5	N/A	N/A	<9.96	N/A
SB4 (4'-6')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	<9.78	N/A
SB4 (4'-6') DUP	1/18/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	<9.92	N/A
SB4 (6'-8')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	N/A	N/A	<9.92	N/A
SB4 (8'-10')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	5	N/A	N/A	<9.90	N/A
SB5 (0'-2')	1/17/2018	32.176090°, -103.381550°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	55	<0.00332 U	<0.00332 U	1330	43.2
SB5 (2'-4')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	55	<0.00202 U	<0.00202 U	1580	<15.0 U
SB5 (4'-6')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	175	<0.00201 U	<0.00201 U	486	<15.0 U
SB5 (6'-8')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	20	<0.00199 U	<0.00199 U	51.7	<15.0 U
SB5 (8'-10')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	5	<0.00200 U	<0.00200 U	23.7	<15.0 U
SB6 (0'-2')	1/17/2018	32.176080°, -103.381720°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	7	<0.00200 U	<0.00200 U	<4.98 U	<15.0 U
SB6 (2'-4')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	350	<0.00201 U	<0.00201 U	404	<15.0 U
SB6 (4'-6')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	470	<0.00200 U	<0.00200 U	1070	<15.0 U
SB6 (6'-8')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	300	<0.00199 U	<0.00199 U	454	<15.0 U
SB6 (8'-10')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	140	<0.00330 U	<0.00330 U	121	<15.0 U
SB6 (10'-12')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	250	<0.00198 U	<0.00198 U	540	<15.0 U
SB6 (12'-14')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	<0.00338 U	<0.00338 U	162	<15.0 U
SB6 (14'-16')	1/17/2018		CE - Caliche	Grey/ Fine	0.0	0	<0.00346 U	<0.00346 U	420	<15.0 U
SB7 (0'-2')	1/18/2018	32.17627°, -103.38174°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	0.0	0	N/A	N/A	<9.82	N/A
SB7 (2'-4')	1/18/2018		CE - Caliche	Grey/ Fine	0.0	5	N/A	N/A	<9.86	N/A
SB7 (4'-6')	1/18/2018		CE - Caliche	Grey/ Fine	1.0	0	N/A	N/A	<9.96	N/A
SB7 (6'-8')	1/18/2018		CE - Caliche	Grey/ Fine	2.0	0	N/A	N/A	<9.78	N/A
SB7 (8'-10')	1/18/2018		CE - Caliche and CS - sandstone with sand stringers	Grey to Red/ Fine	3.0	0	N/A	N/A	<9.82	N/A
SB8 (0'-2')	1/18/2018	32.17618°, -103.38162°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	<1.0	0	<0.00202 U	<0.00202 U	<5.01 U	<15.0 U
SB8 (2'-4')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	0	<0.00200 U	<0.00200 U	<5.02 U	<15.0 U
SB8 (4'-6')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	0	<0.00200 U	<0.00200 U	7.60	<15.0 U
SB8 (6'-8')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	5	<0.00199 U	<0.00199 U	<5.00 U	<15.0 U
SB8 (8'-10')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	5	<0.00199 U	<0.00199 U	<5.00 U	<15.0 U
SB8 (8'-10') DUP	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	5	N/A	N/A	<10.0	N/A
SB9 (0'-2')	1/18/2018	32.17607°, -103.38139°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	<1.0	55	N/A	N/A	238	N/A
SB9 (2'-4')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	125	N/A	N/A	486	N/A
SB9 (4'-6')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	30	N/A	N/A	24.8	N/A
SB9 (6'-8')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	20	N/A	N/A	23.5	N/A
SB9 (8'-10')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	10	N/A	N/A	<9.86	N/A
SB10 (0'-2')	1/18/2018	32.17597°, -103.38126°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	<1.0	0	<0.00200 U	<0.00200 U	<5.01 U	<15.0 U
SB10 (2'-4')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	5	<0.00199 U	<0.00199 U	<5.01 U	<15.0 U
SB10 (4'-6')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	5	<0.00200 U	<0.00200 U	6.70	<15.0 U
SB10 (6'-8')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	5	<0.00201 U	<0.00201 U	<4.98 U	<15.0 U
SB10 (8'-10')	1/18/2018		CE - Caliche	Grey/ Fine	<1.0	0	<0.00200 U	<0.00200 U	9.61	<15.0 U
SB11 (0'-2') (1)	1/23/2018	32.175830°, -103.381390°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB11 (0'-2') (2)	1/23/2018		SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB11 (2'-4')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB11 (4'-6')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	10	N/A	N/A	<5.00 U	N/A
SB11 (6'-8')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	10	N/A	N/A	<5.00 U	N/A
SB11 (8'-10')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	10	N/A	N/A	<5.00 U	N/A
SB11 (10'-11')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB12 (0'-2')	1/23/2018	32.175910°, -103.381490°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB12 (2'-4')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	5	N/A	N/A	<5.00 U	N/A
SB12 (4'-6')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB12 (6'-8')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	5	N/A	N/A	8.43	N/A
SB12 (8'-10')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	5	N/A	N/A	22.6	N/A
SB12 (10'-11')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	0	N/A	N/A	40.2	N/A
SB13 (0'-2')	1/23/2018	32.176000°, -103.381730°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB13 (2'-4')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB13 (4'-6')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB13 (4'-6')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB13 (6'-8')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB13 (8'-10')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB13 (10'-11')	1/23/2018		CE - Caliche	Red/Fine	<1.0	0	N/A	N/A	<5.00 U	N/A
SB14 (0'-2')	1/23/2018	32.176060°, -103.381870°	SP - Poorly - graded sands, gravelly sands, little or no fines	Red/Fine	<1.0	0	N/A	N/A	<4.99 U	N/A
SB14 (2'-4')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	5	N/A	N/A	15.3	N/A
SB14 (4'-6')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	5	N/A	N/A	28.2	N/A
SB14 (6'-8')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	15	N/A	N/A	42.0	N/A
SB14 (8'-10')	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	30	N/A	N/A	106	N/A
SB14 (8'-10') DUP	1/23/2018		CE - Caliche	Grey/ Fine	<1.0	30	N/A	N/A	119	N/A

NOTE:
NR = No Recovery
PR = Probe Refusal
NA = Not Analyzed
DUP = Duplicate sample for analysis
U = Analyte was not detected
GPS locations are subject to a +/- foot margin of error.
Highlight designates an exceedance in applicable criteria

APPENDIX C

Photography Exhibits

Site Photographs

1. View of the spill area.

2. Additional view of spill area.

3. Typical view of borings installed via flight augers.

4. View of typical light red sand soil sample.

5. Typical view of a soil boring installed via flight augers within the ROW.

6. Typical view of boring installed via flight augers.

APPENDIX D

Representative Logs – 1RP-4820

RECORD OF SUBSURFACE EXPLORATION

KJ Environmental & Civil Engineering
500 Moseley Road • Cross Roads, TX 76227
940-387-0805 • FAX 940-387-0830

Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	BG	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	8’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Well Material:**	N/A

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	0.0	5		
	-2-					
	-3-	2.0-4.0		45		
	-4-					
	-5-	4.0-6.0		0		
	-6-					
	-7-	6.0-8.0		0		
	-8-					
	-9-					
NOTE: No water was encountered throughout installation this boring	-10-					
	-11-					
	-12-					
	-13-					
	-14-					
	-15-					
	-20-					
	-21-					
	-22-					
	-23-					
	-24-					
	-27-					
	-28-					
	-29-					
These logs should not be used separately from the original report.	-30-					

RECORD OF SUBSURFACE EXPLORATION

KJ Environmental & Civil Engineering
500 Moseley Road • Cross Roads, TX 76227
940-387-0805 • FAX 940-387-0830

Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-1	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	11.5’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	0.0	0		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		0		
	-4- -5-	4.0-6.0		0		
	-6- -7-	6.0-8.0		0		
	-8- -9-	8.0-10.0		0		
NOTE: No water was encountered throughout installation this boring	-10- -11-	10.0-11.5		0		
	-12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

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Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-2	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	11’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	0.6	10		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0	0.3	650		
	-4- -5-	4.0-6.0	0.9	525		
	-6- -7-	6.0-8.0	1.0	10		
	-8- -9-	8.0-10.0	0.9	5		
Sub-surface Type: Red Sandstone, (CS), with sand stringers, (SP), poorly graded, dry	-10-					
NOTE: No water was encountered throughout installation this boring	-11-	10.0-11.0	0.0	0		
	-12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29-					
These logs should not be used separately from the original report.	-30-					

RECORD OF SUBSURFACE EXPLORATION

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940-387-0805 • FAX 940-387-0830

Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-3	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	11’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	Depth (feet)	Sample Interval (feet)	PID (ppm)	Chloride Screening (ppm)	Sample Core Zone	Well Completion (graphical representation only, not to scale)
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	0.3	0		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0	0.2	0		
	-4- -5-	4.0-6.0	0.0	0		
	-6- -7-	6.0-8.0	0.0	0		
	-8- -9-	8.0-10.0	0.0	0		
NOTE: No water was encountered throughout installation this boring	-10- -11-	10.0-11.0	0.0	0		
	-12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29-					
These logs should not be used separately from the original report.	-30-					

RECORD OF SUBSURFACE EXPLORATION

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Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-4	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	10.0’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	Depth (feet)	Sample Interval (feet)	PID (ppm)	Chloride Screening (ppm)	Sample Core Zone	Well Completion (graphical representation only, not to scale)
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	0.0	5		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		5		
	-4- -5-	4.0-6.0		0		
	-6- -7-	6.0-8.0		0		
	-8- -9-	8.0-10.0		5		
NOTE: No water was encountered throughout installation this boring	-10- -11- -12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

RECORD OF SUBSURFACE EXPLORATION

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500 Moseley Road • Cross Roads, TX 76227
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Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-5	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	10.0’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	Depth (feet)	Sample Interval (feet)	PID (ppm)	Chloride Screening (ppm)	Sample Core Zone	Well Completion (graphical representation only, not to scale)
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	0.0	55		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		55		
	-4- -5-	4.0-6.0		175		
	-6- -7-	6.0-8.0		20		
	-8- -9-	8.0-10.0		5		
NOTE: No water was encountered throughout installation this boring	-10- -11- -12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

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Client Name:	OWL SWD Operating, LLC	**Well/Boring #**	SB-6	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225	**Depth of Boring:**	16’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD	**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83	**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.	**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig **Sampling Method:** Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	0.0	7		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		350		
	-4- -5-	4.0-6.0		470		
	-6- -7-	6.0-8.0		300		
	-8- -9-	8.0-10.0		140		
NOTE: No water was encountered throughout installation this boring	-10- -11-	10.0-12.0		250		
	-12- -13-	12.0-14.0		0		
	-14- -15-	14.0-16.0		0		
	-16-					

These logs should not be used separately from the original report.

RECORD OF SUBSURFACE EXPLORATION

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500 Moseley Road • Cross Roads, TX 76227
940-387-0805 • FAX 940-387-0830

Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-7	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	10.0’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	Depth (feet)	Sample Interval (feet)	PID (ppm)	Chloride Screening (ppm)	Sample Core Zone	Well Completion (graphical representation only, not to scale)
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	0.0	0		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0	0.0	5		
	-4- -5-	4.0-6.0	1.0	0		
	-6- -7-	6.0-8.0	2.0	0		
Sub-surface Type: Grey Caliche, (CE), and Red Sandstone, (CS), with sand stringers, (SP), poorly graded, dry	-8- -9-	8.0-10.0	3.0	0		
NOTE: No water was encountered throughout installation this boring	-10- -11- -12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

RECORD OF SUBSURFACE EXPLORATION

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940-387-0805 • FAX 940-387-0830

Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-8	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	10.0’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	<1.0	0		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		0		
	-4- -5-	4.0-6.0		0		
	-6- -7-	6.0-8.0		5		
	-8- -9-	8.0-10.0		5		
NOTE: No water was encountered throughout installation this boring	-10- -11- -12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

RECORD OF SUBSURFACE EXPLORATION

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940-387-0805 • FAX 940-387-0830

Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-9	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	10.0’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	<1.0	55		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		125		
	-4- -5-	4.0-6.0		30		
	-6- -7-	6.0-8.0		20		
	-8- -9-	8.0-10.0		10		
NOTE: No water was encountered throughout installation this boring	-10- -11- -12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

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Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-10	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	10.0’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	<1.0	5		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		5		
	-4- -5-	4.0-6.0		5		
	-6- -7-	6.0-8.0		0		
	-8- -9-	8.0-10.0		0		
NOTE: No water was encountered throughout installation this boring	-10- -11- -12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

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Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-11	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	11’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	<1.0	0		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		0		
	-4- -5-	4.0-6.0		10		
	-6- -7-	6.0-8.0		10		
	-8- -9-	8.0-10.0		10		
	-10-	10.0-11.0		0		
NOTE: No water was encountered throughout installation this boring	-11- -12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

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Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-12	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	11’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	Depth (feet)	Sample Interval (feet)	PID (ppm)	Chloride Screening (ppm)	Sample Core Zone	Well Completion (graphical representation only, not to scale)
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	<1.0	0		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		5		
	-4- -5-	4.0-6.0		0		
	-6- -7-	6.0-8.0		5		
	-8- -9-	8.0-10.0		5		
	-10-	10.0-11.0		0		
NOTE: No water was encountered throughout installation this boring	-11- -12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

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Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-13	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	11’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	<1.0	0		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		0		
	-4- -5-	4.0-6.0		0		
	-6- -7-	6.0-8.0		0		
	-8- -9-	8.0-10.0		0		
NOTE: No water was encountered throughout installation this boring	-10- -11-	10.0-11.0		0		
	-12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

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Client Name:	OWL SWD Operating, LLC			**Well/Boring #**	SB-14	**Date Drilled:**	Jan. 17-23, 2018
Client Address:	8214 Westchester Drive Suite #850, Dallas, Texas 75225			**Depth of Boring:**	10.0’	**Diameter of Boring:**	4”
Project Name:	Produced Water Pipeline Releases Nearby OWL SWD			**Depth of Well:**	N/A	**Diameter of Screen:**	N/A
Project Address:	32.1759, -103.3810 NAD 83			**Length of Screen:**	N/A	**Diameter of Casing:**	N/A
Driller:	Atkins Engineering Associates Inc.			**Length of Casing:**	N/A	**Slot Size:**	N/A
Drilling Method:	CME Rig	**Sampling Method:**	Split Spoon	**Logged By:**	James F.	**Drilling Method:**	CME Rig

Description / Remarks (Color, Grain Size, Texture, Structure, Consistency, Moisture)	**Depth (feet)**	**Sample Interval (feet)**	**PID (ppm)**	**Chloride Screening (ppm)**	**Sample Core Zone**	**Well Completion** *(graphical representation only, not to scale)*
Surface Type: Topsoil, Light Red fine SAND, (SP), poorly graded, dry						Bentonite
Sub-surface Type: Red/light red SAND, (SP), poorly graded, dry	-1-	0.0-2.0	<1.0	5		
Sub-surface Type: Grey Caliche, (CE), poorly graded, dry	-2- -3-	2.0-4.0		5		
	-4- -5-	4.0-6.0		15		
	-6- -7-	6.0-8.0		30		
	-8- -9-	8.0-10.0		30		
NOTE: No water was encountered throughout installation this boring	-10- -11- -12- -13- -14- -15- -20- -21- -22- -23- -24- -27- -28- -29- -30-					

These logs should not be used separately from the original report.

APPENDIX E

Laboratory Analytical Reports

Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	573941-001		573941-002		573941-003		573941-004		573941-005		573941-006	
	Field Id:	BG 0-2		BG 2-4		BG 4-6		SB1 0-2		SB1 2-4		SB1 4-6	
	Depth:	2- ft		4- ft		6- ft		2- ft		4- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-17-18 10:30		Jan-17-18 10:40		Jan-17-18 10:50		Jan-17-18 11:30		Jan-17-18 11:40		Jan-17-18 11:50	
Chloride by EPA 300 SUB: TX104704215-18-24	***Extracted:***	Feb-23-18 10:31		Feb-23-18 10:31		Feb-23-18 10:31		Feb-23-18 10:31		Feb-23-18 10:31		Feb-23-18 10:31	
	Analyzed:	Feb-23-18 17:57		Feb-23-18 18:29		Feb-23-18 18:39		Feb-23-18 18:50		Feb-23-18 19:00		Feb-23-18 19:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<9.92	9.92	<9.98	9.98	<9.84	9.84	<9.96	9.96	<9.94	9.94	<9.84	9.84

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The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
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Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	573941-007		573941-008		573941-009		573941-010		573941-011		573941-012	
	Field Id:	SB1 6-8		SB1 8-10		SB1 10-11.51		SB2 0-2		SB2 2-4		SB2 4-6	
	Depth:	8- ft		10- ft		11.5- ft		2- ft		4- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-17-18 12:00		Jan-17-18 12:10		Jan-17-18 12:20		Jan-17-18 12:30		Jan-17-18 12:40		Jan-17-18 12:50	
BTEX by EPA 8021B	***Extracted:***							Jan-24-18 16:00		Jan-23-18 08:30		Jan-23-18 08:30	
	Analyzed:							Jan-24-18 19:30		Jan-23-18 20:49		Jan-23-18 21:08	
	Units/RL:							mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene								<0.00336	0.00336	<0.00200	0.00200	<0.00201	0.00201
Toluene								<0.00336	0.00336	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene								<0.00336	0.00336	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes								<0.00671	0.00671	<0.00399	0.00399	<0.00402	0.00402
o-Xylene								<0.00336	0.00336	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes								<0.00336	0.00336	<0.00200	0.00200	<0.00201	0.00201
Total BTEX								<0.00336	0.00336	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300 **SUB: TX104704215-18-24**	***Extracted:***	Feb-23-18 10:31		Feb-26-18 12:00		Feb-26-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00	
	Analyzed:	Feb-23-18 19:21		Feb-26-18 12:25		Feb-26-18 12:35		Jan-23-18 16:56		Jan-23-18 17:03		Jan-23-18 16:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		43.9	9.80	31.2	9.90	106	9.88	16.8	4.99	2680	25.0	1220	5.00
TPH By SW8015 Mod	***Extracted:***							Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00	
	Analyzed:							Jan-23-18 17:06		Jan-23-18 18:05		Jan-23-18 18:25	
	Units/RL:							mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)								<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)								<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)								<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH								<15.0	15.0	<15.0	15.0	<15.0	15.0

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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.

Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	573941-013		573941-014		573941-015		573941-016		573941-017		573941-018	
	Field Id:	SB2 6-8		SB2 8-10		SB2 10-11		SB3 0-2		SB3 2-4		SB3 4-6	
	Depth:	8- ft		10- ft		11- ft		2- ft		4- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-17-18 13:00		Jan-17-18 13:10		Jan-17-18 13:20		Jan-17-18 14:00		Jan-17-18 14:10		Jan-17-18 14:20	
BTEX by EPA 8021B	***Extracted:***	Jan-23-18 08:30		Jan-23-18 08:30		Jan-23-18 08:30							
	Analyzed:	Jan-23-18 21:27		Jan-23-18 21:46		Jan-23-18 22:05							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202						
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202						
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202						
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00403	0.00403						
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202						
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202						
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202						
Chloride by EPA 300	***Extracted:***	Jan-23-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00		Feb-26-18 12:00		Feb-23-18 10:31		Feb-23-18 10:31	
	Analyzed:	Jan-23-18 17:10		Jan-23-18 17:17		Jan-23-18 17:24		Feb-26-18 12:46		Feb-23-18 19:32		Feb-23-18 20:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		236	5.01	32.2	5.01	<4.99	4.99	<9.94	9.94	<9.78	9.78	<9.80	9.80
TPH By SW8015 Mod	***Extracted:***	Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00							
	Analyzed:	Jan-23-18 18:45		Jan-23-18 19:06		Jan-23-18 19:26							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0						
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0						
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0						
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0						

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Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	573941-019		573941-020		573941-021		573941-022		573941-023		573941-024	
	Field Id:	SB3 6-8		SB3 8-10		SB3 10-11		SB4 0-2		SB4 2-4		SB4 4-6 (1)	
	Depth:	8- ft		10- ft		11- ft		2- ft		4- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-17-18 14:30		Jan-17-18 14:40		Jan-17-18 14:50		Jan-17-18 14:55		Jan-17-18 15:00		Jan-17-18 15:10	
Chloride by EPA 300 SUB: TX104704215-18-24	***Extracted:***	Feb-23-18 10:31		Feb-23-18 07:29		Feb-23-18 07:29		Feb-23-18 07:29		Feb-23-18 07:29		Feb-23-18 07:29	
	Analyzed:	Feb-23-18 20:14		Feb-23-18 21:17		Feb-23-18 21:48		Feb-23-18 21:58		Feb-23-18 22:09		Feb-23-18 22:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<9.90	9.90	20.5	9.84	65.8	9.92	39.8	9.96	<9.96	9.96	<9.78	9.78

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Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested															
	Lab Id:	573941-025		573941-026		573941-027		573941-028		573941-029		573941-030			
	Field Id:	SB4 6-8		SB4 8-10		SB5 0-2		SB5 2-4		SB5 4-6		SB5 6-8			
	Depth:	8- ft		10- ft		2- ft		4- ft		6- ft		8- ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
	Sampled:	Jan-17-18 15:20		Jan-17-18 15:30		Jan-17-18 15:45		Jan-17-18 15:55		Jan-17-18 16:00		Jan-17-18 16:10			
BTEX by EPA 8021B	***Extracted:***					Jan-24-18 16:00		Jan-23-18 08:30		Jan-23-18 08:30		Jan-23-18 08:30			
	Analyzed:					Jan-24-18 19:49		Jan-23-18 16:41		Jan-23-18 22:43		Jan-23-18 23:02			
	Units/RL:					mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene						<0.00332	0.00332	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199		
Toluene						<0.00332	0.00332	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199		
Ethylbenzene						<0.00332	0.00332	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199		
m,p-Xylenes						<0.00664	0.00664	<0.00403	0.00403	<0.00402	0.00402	<0.00398	0.00398		
o-Xylene						<0.00332	0.00332	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199		
Total Xylenes						<0.00332	0.00332	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199		
Total BTEX						<0.00332	0.00332	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199		
Chloride by EPA 300 **SUB: TX104704215-18-24**	***Extracted:***	Feb-23-18 07:29		Feb-23-18 07:29		Jan-23-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00			
	Analyzed:	Feb-23-18 22:51		Feb-23-18 23:01		Jan-23-18 17:31		Jan-23-18 17:38		Jan-23-18 17:45		Jan-23-18 17:52			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		<9.92	9.92	<9.90	9.90	1330	24.9	1580	24.9	486	5.00	51.7	5.00		
TPH By SW8015 Mod	***Extracted:***					Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00			
	Analyzed:					Jan-23-18 19:46		Jan-23-18 20:05		Jan-23-18 20:25		Jan-23-18 20:46			
	Units/RL:					mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)						<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)						43.2	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Oil Range Hydrocarbons (ORO)						<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH						43.2	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		

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Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	573941-031		573941-032		573941-033		573941-034		573941-035		573941-036	
	Field Id:	SB5 8-10		SB6 0-2		SB6 2-4		SB6 4-6		SB6 6-8		SB6 8-10	
	Depth:	10- ft		2- ft		4- ft		6- ft		8- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-17-18 16:20		Jan-17-18 16:30		Jan-17-18 16:40		Jan-17-18 16:50		Jan-17-18 17:00		Jan-17-18 17:10	
BTEX by EPA 8021B	***Extracted:***	Jan-23-18 08:30		Jan-23-18 08:30		Jan-23-18 17:00		Jan-23-18 17:00		Jan-23-18 17:00		Jan-24-18 16:00	
	Analyzed:	Jan-23-18 23:21		Jan-23-18 17:00		Jan-24-18 04:58		Jan-24-18 08:07		Jan-24-18 08:26		Jan-24-18 20:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00330	0.00330
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00330	0.00330
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00330	0.00330
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00402	0.00402	<0.00399	0.00399	<0.00398	0.00398	<0.00660	0.00660
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00330	0.00330
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00330	0.00330
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00330	0.00330
Chloride by EPA 300	***Extracted:***	Jan-23-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00	
	Analyzed:	Jan-23-18 17:59		Jan-23-18 18:34		Jan-23-18 18:41		Jan-23-18 18:48		Jan-23-18 18:55		Jan-23-18 19:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		23.7	4.97	<4.98	4.98	404	4.97	1070	4.99	454	4.96	121	5.00
TPH By SW8015 Mod	***Extracted:***	Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00	
	Analyzed:	Jan-23-18 21:47		Jan-23-18 22:07		Jan-23-18 22:27		Jan-23-18 22:50		Jan-23-18 23:10		Jan-23-18 23:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	573941-037		573941-038		573941-039		573941-040		573941-041		573941-042	
	Field Id:	SB6 10-12		SB6 12-14		SB6 14-16		SB7 0-2		SB7 2-4		SB7 4-6	
	Depth:	12- ft		14- ft		16- ft		2- ft		4- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-17-18 17:20		Jan-17-18 17:30		Jan-17-18 17:40		Jan-18-18 08:00		Jan-18-18 08:10		Jan-18-18 08:20	
BTEX by EPA 8021B	***Extracted:***	Jan-23-18 17:00		Jan-24-18 16:00		Jan-24-18 16:00							
	Analyzed:	Jan-24-18 09:04		Jan-24-18 20:27		Jan-24-18 20:46							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00198	0.00198	<0.00338	0.00338	<0.00346	0.00346						
Toluene		<0.00198	0.00198	<0.00338	0.00338	<0.00346	0.00346						
Ethylbenzene		<0.00198	0.00198	<0.00338	0.00338	<0.00346	0.00346						
m,p-Xylenes		<0.00396	0.00396	<0.00676	0.00676	<0.00692	0.00692						
o-Xylene		<0.00198	0.00198	<0.00338	0.00338	<0.00346	0.00346						
Total Xylenes		<0.00198	0.00198	<0.00338	0.00338	<0.00346	0.00346						
Total BTEX		<0.00198	0.00198	<0.00338	0.00338	<0.00346	0.00346						
Chloride by EPA 300	***Extracted:***	Jan-23-18 12:00		Jan-23-18 12:00		Jan-23-18 12:00		Feb-23-18 07:29		Feb-23-18 07:29		Feb-23-18 07:29	
	Analyzed:	Jan-23-18 19:09		Jan-23-18 19:16		Jan-23-18 19:23		Feb-23-18 23:12		Feb-23-18 23:22		Feb-23-18 23:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		540	5.00	162	5.00	420	5.00	<9.82	9.82	<9.86	9.86	<9.96	9.96
TPH By SW8015 Mod	***Extracted:***	Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00							
	Analyzed:	Jan-23-18 23:49		Jan-24-18 00:09		Jan-24-18 00:30							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0						
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0						
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0						
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0						

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Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested															
	Lab Id:	573941-043		573941-044		573941-045		573941-046		573941-047		573941-048			
	Field Id:	SB7 6-8		SB7 8-10		SB8 0-2		SB8 2-4		SB8 4-6		SB8 6-8			
	Depth:	8- ft		10- ft		2- ft		4- ft		6- ft		8- ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
	Sampled:	Jan-18-18 08:30		Jan-18-18 08:40		Jan-18-18 08:50		Jan-18-18 09:00		Jan-18-18 09:10		Jan-18-18 09:20			
BTEX by EPA 8021B	***Extracted:***					Jan-23-18 17:00		Jan-23-18 17:00		Jan-23-18 17:00		Jan-23-18 17:00			
	Analyzed:					Jan-24-18 10:01		Jan-24-18 02:09		Jan-24-18 02:28		Jan-24-18 02:46			
	Units/RL:					mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene						<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199		
Toluene						<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199		
Ethylbenzene						<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199		
m,p-Xylenes						<0.00403	0.00403	<0.00401	0.00401	<0.00401	0.00401	<0.00398	0.00398		
o-Xylene						<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199		
Total Xylenes						<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199		
Total BTEX						<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199		
Chloride by EPA 300 **SUB: TX104704215-18-24**	***Extracted:***	Feb-23-18 07:29		Feb-23-18 07:29		Jan-23-18 12:00		Jan-23-18 16:45		Jan-23-18 16:45		Jan-23-18 16:45			
	Analyzed:	Feb-23-18 23:43		Feb-23-18 23:54		Jan-23-18 19:44		Jan-23-18 20:12		Jan-23-18 20:33		Jan-23-18 20:40			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		<9.78	9.78	<9.82	9.82	<5.01	5.01	<5.02	5.02	7.60	4.98	<5.00	5.00		
TPH By SW8015 Mod	***Extracted:***					Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00		Jan-23-18 14:00			
	Analyzed:					Jan-24-18 00:52		Jan-24-18 02:34		Jan-24-18 03:32		Jan-24-18 03:52			
	Units/RL:					mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)						<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)						<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Oil Range Hydrocarbons (ORO)						<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH						<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		

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Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	573941-049		573941-050		573941-051		573941-052		573941-053		573941-054	
	Field Id:	SB8 8-10 (1)		SB9 0-2		SB9 2-4		SB9 4-6		SB9 6-8		SB9 8-10	
	Depth:	10- ft		2- ft		4- ft		6- ft		8- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-18-18 09:30		Jan-18-18 10:15		Jan-18-18 10:20		Jan-18-18 10:30		Jan-18-18 10:40		Jan-18-18 10:50	
BTEX by EPA 8021B	***Extracted:***	Jan-23-18 17:00											
	Analyzed:	Jan-24-18 03:05											
	Units/RL:	mg/kg	RL										
Benzene		<0.00199	0.00199										
Toluene		<0.00199	0.00199										
Ethylbenzene		<0.00199	0.00199										
m,p-Xylenes		<0.00398	0.00398										
o-Xylene		<0.00199	0.00199										
Total Xylenes		<0.00199	0.00199										
Total BTEX		<0.00199	0.00199										
Chloride by EPA 300	***Extracted:***	Jan-23-18 16:45		Feb-23-18 07:29		Feb-23-18 07:29		Feb-23-18 07:29		Feb-23-18 07:29		Feb-23-18 07:29	
	Analyzed:	Jan-23-18 20:47		Feb-24-18 00:04		Feb-24-18 00:15		Feb-24-18 00:25		Feb-24-18 00:57		Feb-26-18 15:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.00	5.00	238	9.90	486	9.88	24.8	9.84	23.5	9.92	<9.86	9.86
TPH By SW8015 Mod	***Extracted:***	Jan-23-18 14:00											
	Analyzed:	Jan-24-18 04:12											
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0										
Diesel Range Organics (DRO)		<15.0	15.0										
Oil Range Hydrocarbons (ORO)		<15.0	15.0										
Total TPH		<15.0	15.0										

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Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested																							
	Lab Id:	573941-055				573941-056				573941-057				573941-058				573941-059				573941-060	
	Field Id:	SB10 0-2				SB10 2-4				SB10 4-6				SB10 6-8				SB10 8-10				SB4 4-6 (2)	
	Depth:	2- ft				4- ft				6- ft				8- ft				10- ft				6- ft	
	Matrix:	SOIL				SOIL				SOIL				SOIL				SOIL				SOIL	
	Sampled:	Jan-18-18 11:00				Jan-18-18 11:10				Jan-18-18 11:20				Jan-18-18 11:30				Jan-18-18 11:40				Jan-18-18 11:40	
BTEX by EPA 8021B	***Extracted:***	Jan-23-18 17:00				Jan-23-18 17:00				Jan-23-18 17:00				Jan-23-18 17:00				Jan-23-18 17:00					
	Analyzed:	Jan-24-18 03:24				Jan-24-18 03:43				Jan-24-18 04:02				Jan-24-18 04:20				Jan-24-18 04:39					
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL			mg/kg	RL			mg/kg	RL				
Benzene		<0.00200	0.00200			<0.00199	0.00199			<0.00200	0.00200			<0.00201	0.00201			<0.00200	0.00200				
Toluene		<0.00200	0.00200			<0.00199	0.00199			<0.00200	0.00200			<0.00201	0.00201			<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200			<0.00199	0.00199			<0.00200	0.00200			<0.00201	0.00201			<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401			<0.00398	0.00398			<0.00399	0.00399			<0.00402	0.00402			<0.00401	0.00401				
o-Xylene		<0.00200	0.00200			<0.00199	0.00199			<0.00200	0.00200			<0.00201	0.00201			<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200			<0.00199	0.00199			<0.00200	0.00200			<0.00201	0.00201			<0.00200	0.00200				
Total BTEX		<0.00200	0.00200			<0.00199	0.00199			<0.00200	0.00200			<0.00201	0.00201			<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Jan-23-18 16:45				Jan-23-18 16:45				Jan-23-18 16:45				Jan-23-18 16:45				Jan-23-18 16:45				Feb-23-18 07:29	
	Analyzed:	Jan-23-18 21:07				Jan-23-18 21:14				Jan-23-18 21:21				Jan-23-18 21:28				Jan-23-18 21:35				Feb-24-18 01:07	
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL			mg/kg	RL			mg/kg	RL			mg/kg	RL
Chloride		<5.01	5.01			<5.01	5.01			6.70	5.01			<4.98	4.98			9.61	5.01			<9.92	9.92
TPH By SW8015 Mod	***Extracted:***	Jan-23-18 14:00				Jan-23-18 14:00				Jan-23-18 14:00				Jan-23-18 14:00				Jan-23-18 14:00					
	Analyzed:	Jan-24-18 04:32				Jan-24-18 04:52				Jan-24-18 05:14				Jan-24-18 05:35				Jan-24-18 05:55					
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL			mg/kg	RL			mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0			<15.0	15.0			<15.0	15.0			<15.0	15.0			<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0			<15.0	15.0			<15.0	15.0			<15.0	15.0			<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0			<15.0	15.0			<15.0	15.0			<15.0	15.0			<15.0	15.0				
Total TPH		<15.0	15.0			<15.0	15.0			<15.0	15.0			<15.0	15.0			<15.0	15.0				

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

Certificate of Analysis Summary 573941

OWL SWD Operating LLC, Dallas, TX

Project Name: IRP-4820

Project Id: OWL091317D
Contact: Phillip Sanders
Project Location: JAL NM

Date Received in Lab: Thu Jan-18-18 05:00 pm
Report Date: 26-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	573941-061		573941-062			
	Field Id:	BG 6-8		SB8 8-10 (2)			
	Depth:	8- ft		10- ft			
	Matrix:	SOIL		SOIL			
	Sampled:	Jan-18-18 11:40		Jan-18-18 11:40			
Chloride by EPA 300 **SUB: TX104704215-18-24**	***Extracted:***	Feb-23-18 07:29		Feb-23-18 07:29			
	Analyzed:	Feb-24-18 01:18		Feb-24-18 01:28			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		<9.96	9.96	<10.0	10.0		

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

Kelsey Brooks
Project Manager

Analytical Report 573941

for

OWL SWD Operating LLC

Project Manager: Phillip Sanders

IRP-4820

OWL091317D

26-FEB-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

26-FEB-18

Project Manager: **Phillip Sanders**
OWL SWD Operating LLC
8214 Westchester Dr. Suite 850
Dallas, TX 75225

Reference: XENCO Report No(s): **573941**
IRP-4820
Project Address: JAL NM

Phillip Sanders:

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) 573941. 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. 573941 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,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BG 0-2	S	01-17-18 10:30	2 ft	573941-001
BG 2-4	S	01-17-18 10:40	4 ft	573941-002
BG 4-6	S	01-17-18 10:50	6 ft	573941-003
SB1 0-2	S	01-17-18 11:30	2 ft	573941-004
SB1 2-4	S	01-17-18 11:40	4 ft	573941-005
SB1 4-6	S	01-17-18 11:50	6 ft	573941-006
SB1 6-8	S	01-17-18 12:00	8 ft	573941-007
SB1 8-10	S	01-17-18 12:10	10 ft	573941-008
SB1 10-11.51	S	01-17-18 12:20	11.5 ft	573941-009
SB2 0-2	S	01-17-18 12:30	2 ft	573941-010
SB2 2-4	S	01-17-18 12:40	4 ft	573941-011
SB2 4-6	S	01-17-18 12:50	6 ft	573941-012
SB2 6-8	S	01-17-18 13:00	8 ft	573941-013
SB2 8-10	S	01-17-18 13:10	10 ft	573941-014
SB2 10-11	S	01-17-18 13:20	11 ft	573941-015
SB3 0-2	S	01-17-18 14:00	2 ft	573941-016
SB3 2-4	S	01-17-18 14:10	4 ft	573941-017
SB3 4-6	S	01-17-18 14:20	6 ft	573941-018
SB3 6-8	S	01-17-18 14:30	8 ft	573941-019
SB3 8-10	S	01-17-18 14:40	10 ft	573941-020
SB3 10-11	S	01-17-18 14:50	11 ft	573941-021
SB4 0-2	S	01-17-18 14:55	2 ft	573941-022
SB4 2-4	S	01-17-18 15:00	4 ft	573941-023
SB4 4-6 (1)	S	01-17-18 15:10	6 ft	573941-024
SB4 6-8	S	01-17-18 15:20	8 ft	573941-025
SB4 8-10	S	01-17-18 15:30	10 ft	573941-026
SB5 0-2	S	01-17-18 15:45	2 ft	573941-027
SB5 2-4	S	01-17-18 15:55	4 ft	573941-028
SB5 4-6	S	01-17-18 16:00	6 ft	573941-029
SB5 6-8	S	01-17-18 16:10	8 ft	573941-030
SB5 8-10	S	01-17-18 16:20	10 ft	573941-031
SB6 0-2	S	01-17-18 16:30	2 ft	573941-032
SB6 2-4	S	01-17-18 16:40	4 ft	573941-033
SB6 4-6	S	01-17-18 16:50	6 ft	573941-034
SB6 6-8	S	01-17-18 17:00	8 ft	573941-035
SB6 8-10	S	01-17-18 17:10	10 ft	573941-036
SB6 10-12	S	01-17-18 17:20	12 ft	573941-037
SB6 12-14	S	01-17-18 17:30	14 ft	573941-038
SB6 14-16	S	01-17-18 17:40	16 ft	573941-039
SB7 0-2	S	01-18-18 08:00	2 ft	573941-040
SB7 2-4	S	01-18-18 08:10	4 ft	573941-041
SB7 4-6	S	01-18-18 08:20	6 ft	573941-042
SB7 6-8	S	01-18-18 08:30	8 ft	573941-043

SB7 8-10	S	01-18-18 08:40	10 ft	573941-044
SB8 0-2	S	01-18-18 08:50	2 ft	573941-045
SB8 2-4	S	01-18-18 09:00	4 ft	573941-046
SB8 4-6	S	01-18-18 09:10	6 ft	573941-047
SB8 6-8	S	01-18-18 09:20	8 ft	573941-048
SB8 8-10 (1)	S	01-18-18 09:30	10 ft	573941-049
SB9 0-2	S	01-18-18 10:15	2 ft	573941-050
SB9 2-4	S	01-18-18 10:20	4 ft	573941-051
SB9 4-6	S	01-18-18 10:30	6 ft	573941-052
SB9 6-8	S	01-18-18 10:40	8 ft	573941-053
SB9 8-10	S	01-18-18 10:50	10 ft	573941-054
SB10 0-2	S	01-18-18 11:00	2 ft	573941-055
SB10 2-4	S	01-18-18 11:10	4 ft	573941-056
SB10 4-6	S	01-18-18 11:20	6 ft	573941-057
SB10 6-8	S	01-18-18 11:30	8 ft	573941-058
SB10 8-10	S	01-18-18 11:40	10 ft	573941-059
SB4 4-6 (2)	S	01-18-18 11:40	6 ft	573941-060
BG 6-8	S	01-18-18 11:40	8 ft	573941-061
SB8 8-10 (2)	S	01-18-18 11:40	10 ft	573941-062

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3039101 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3039105 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 573941-046 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Toluene recovered below QC limits in the Matrix Spike. Benzene, Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 573941-033, -034, -035, -037, -045, -046, -047, -048, -049, -055, -056, -057, -058, -059.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3039239 Chloride by EPA 300
Lab Sample ID 573941-031 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 573941-010, -011, -012, -013, -014, -015, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039, -045.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3039242 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**BG 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-001	Date Collected:	01.17.18 10.30	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	02.23.18 17.57	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**BG 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-002	Date Collected:	01.17.18 10.40	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	02.23.18 18.29	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**BG 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-003	Date Collected:	01.17.18 10.50	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.84	9.84	mg/kg	02.23.18 18.39	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB1 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-004	Date Collected:	01.17.18 11.30	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	02.23.18 18.50	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB1 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-005	Date Collected:	01.17.18 11.40	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	02.23.18 19.00	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB1 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-006	Date Collected:	01.17.18 11.50	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.84	9.84	mg/kg	02.23.18 19.11	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB1 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-007	Date Collected:	01.17.18 12.00	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.9**	9.80	mg/kg	02.23.18 19.21		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB1 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-008	Date Collected:	01.17.18 12.10	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042112			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.2**	9.90	mg/kg	02.26.18 12.25		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB1 10-11.51**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-009	Date Collected:	01.17.18 12.20	Sample Depth:	11.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042112			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**106**	9.88	mg/kg	02.26.18 12.35		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-010	Date Collected:	01.17.18 12.30	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.8**	4.99	mg/kg	01.23.18 16.56		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 17.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 17.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 17.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 17.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	01.23.18 17.06	
o-Terphenyl	84-15-1	115	%	70-135	01.23.18 17.06	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-010	Date Collected:	01.17.18 12.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.24.18 16.00	Basis:	Wet Weight
Seq Number:	3039242				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00336	0.00336	mg/kg	01.24.18 19.30	U	1
Toluene	108-88-3	<0.00336	0.00336	mg/kg	01.24.18 19.30	U	1
Ethylbenzene	100-41-4	<0.00336	0.00336	mg/kg	01.24.18 19.30	U	1
m,p-Xylenes	179601-23-1	<0.00671	0.00671	mg/kg	01.24.18 19.30	U	1
o-Xylene	95-47-6	<0.00336	0.00336	mg/kg	01.24.18 19.30	U	1
Total Xylenes	1330-20-7	<0.00336	0.00336	mg/kg	01.24.18 19.30	U	1
Total BTEX		<0.00336	0.00336	mg/kg	01.24.18 19.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	80-120	01.24.18 19.30	
4-Bromofluorobenzene	460-00-4	94	%	80-120	01.24.18 19.30	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-011	Date Collected:	01.17.18 12.40	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2680**	25.0	mg/kg	01.23.18 17.03		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 18.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 18.05	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 18.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 18.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	01.23.18 18.05	
o-Terphenyl	84-15-1	119	%	70-135	01.23.18 18.05	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-011	Date Collected:	01.17.18 12.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.23.18 20.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.23.18 20.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.23.18 20.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.23.18 20.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.23.18 20.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.23.18 20.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.23.18 20.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	80-120	01.23.18 20.49	
1,4-Difluorobenzene	540-36-3	94	%	80-120	01.23.18 20.49	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-012	Date Collected:	01.17.18 12.50	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1220**	5.00	mg/kg	01.23.18 16.21		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 18.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 18.25	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 18.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 18.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.23.18 18.25	
o-Terphenyl	84-15-1	108	%	70-135	01.23.18 18.25	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-012	Date Collected:	01.17.18 12.50	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.23.18 21.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.23.18 21.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.23.18 21.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.23.18 21.08	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.23.18 21.08	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.23.18 21.08	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.23.18 21.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	80-120	01.23.18 21.08	
4-Bromofluorobenzene	460-00-4	87	%	80-120	01.23.18 21.08	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-013	Date Collected:	01.17.18 13.00	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**236**	5.01	mg/kg	01.23.18 17.10		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 18.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 18.45	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 18.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 18.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	01.23.18 18.45	
o-Terphenyl	84-15-1	110	%	70-135	01.23.18 18.45	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-013	Date Collected:	01.17.18 13.00	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.23.18 21.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.23.18 21.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.23.18 21.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.23.18 21.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.23.18 21.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.23.18 21.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.23.18 21.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	80-120	01.23.18 21.27	
4-Bromofluorobenzene	460-00-4	85	%	80-120	01.23.18 21.27	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-014	Date Collected:	01.17.18 13.10	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.2**	5.01	mg/kg	01.23.18 17.17		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 19.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 19.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 19.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 19.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	01.23.18 19.06	
o-Terphenyl	84-15-1	110	%	70-135	01.23.18 19.06	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-014	Date Collected:	01.17.18 13.10	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.23.18 21.46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.23.18 21.46	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.23.18 21.46	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.23.18 21.46	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.23.18 21.46	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.23.18 21.46	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.23.18 21.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	01.23.18 21.46	
4-Bromofluorobenzene	460-00-4	87	%	80-120	01.23.18 21.46	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 10-11**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-015	Date Collected:	01.17.18 13.20	Sample Depth:	11 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	01.23.18 17.24	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 19.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 19.26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 19.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 19.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	01.23.18 19.26	
o-Terphenyl	84-15-1	121	%	70-135	01.23.18 19.26	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB2 10-11**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-015	Date Collected:	01.17.18 13.20	Sample Depth:	11 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.23.18 22.05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.23.18 22.05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.23.18 22.05	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.23.18 22.05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.23.18 22.05	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.23.18 22.05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.23.18 22.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	80-120	01.23.18 22.05	
1,4-Difluorobenzene	540-36-3	97	%	80-120	01.23.18 22.05	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB3 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-016	Date Collected:	01.17.18 14.00	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042112			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	02.26.18 12.46	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB3 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-017	Date Collected:	01.17.18 14.10	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.78	9.78	mg/kg	02.23.18 19.32	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB3 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-018	Date Collected:	01.17.18 14.20	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.80	9.80	mg/kg	02.23.18 20.03	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB3 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-019	Date Collected:	01.17.18 14.30	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 10.31	Basis:	Wet Weight
Seq Number:	3042053			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.90	9.90	mg/kg	02.23.18 20.14	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB3 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-020	Date Collected:	01.17.18 14.40	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.5**	9.84	mg/kg	02.23.18 21.17		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB3 10-11**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-021	Date Collected:	01.17.18 14.50	Sample Depth:	11 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**65.8**	9.92	mg/kg	02.23.18 21.48		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB4 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-022	Date Collected:	01.17.18 14.55	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.8**	9.96	mg/kg	02.23.18 21.58		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB4 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-023	Date Collected:	01.17.18 15.00	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	02.23.18 22.09	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB4 4-6 (1)**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-024	Date Collected:	01.17.18 15.10	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.78	9.78	mg/kg	02.23.18 22.19	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB4 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-025	Date Collected:	01.17.18 15.20	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	02.23.18 22.51	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB4 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-026	Date Collected:	01.17.18 15.30	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.90	9.90	mg/kg	02.23.18 23.01	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB5 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-027	Date Collected:	01.17.18 15.45	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1330**	24.9	mg/kg	01.23.18 17.31		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 19.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**43.2**	15.0	mg/kg	01.23.18 19.46		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 19.46	U	1
Total TPH	PHC635	**43.2**	15.0	mg/kg	01.23.18 19.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.23.18 19.46	
o-Terphenyl	84-15-1	108	%	70-135	01.23.18 19.46	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB5 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-027	Date Collected:	01.17.18 15.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.24.18 16.00	Basis:	Wet Weight
Seq Number:	3039242				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00332	0.00332	mg/kg	01.24.18 19.49	U	1
Toluene	108-88-3	<0.00332	0.00332	mg/kg	01.24.18 19.49	U	1
Ethylbenzene	100-41-4	<0.00332	0.00332	mg/kg	01.24.18 19.49	U	1
m,p-Xylenes	179601-23-1	<0.00664	0.00664	mg/kg	01.24.18 19.49	U	1
o-Xylene	95-47-6	<0.00332	0.00332	mg/kg	01.24.18 19.49	U	1
Total Xylenes	1330-20-7	<0.00332	0.00332	mg/kg	01.24.18 19.49	U	1
Total BTEX		<0.00332	0.00332	mg/kg	01.24.18 19.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	80-120	01.24.18 19.49	
4-Bromofluorobenzene	460-00-4	96	%	80-120	01.24.18 19.49	

Certificate of Analytical Results 573941

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IRP-4820

Sample Id:	**SB5 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-028	Date Collected:	01.17.18 15.55	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1580**	24.9	mg/kg	01.23.18 17.38		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 20.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 20.05	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 20.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 20.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	01.23.18 20.05	
o-Terphenyl	84-15-1	112	%	70-135	01.23.18 20.05	

Certificate of Analytical Results 573941

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IRP-4820

Sample Id:	**SB5 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-028	Date Collected:	01.17.18 15.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.23.18 16.41	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.23.18 16.41	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.23.18 16.41	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.23.18 16.41	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.23.18 16.41	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.23.18 16.41	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.23.18 16.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	01.23.18 16.41	
4-Bromofluorobenzene	460-00-4	88	%	80-120	01.23.18 16.41	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB5 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-029	Date Collected:	01.17.18 16.00	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**486**	5.00	mg/kg	01.23.18 17.45		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 20.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 20.25	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 20.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 20.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	01.23.18 20.25	
o-Terphenyl	84-15-1	105	%	70-135	01.23.18 20.25	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB5 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-029	Date Collected:	01.17.18 16.00	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.23.18 22.43	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.23.18 22.43	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.23.18 22.43	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.23.18 22.43	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.23.18 22.43	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.23.18 22.43	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.23.18 22.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	80-120	01.23.18 22.43	
4-Bromofluorobenzene	460-00-4	88	%	80-120	01.23.18 22.43	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB5 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-030	Date Collected:	01.17.18 16.10	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.7**	5.00	mg/kg	01.23.18 17.52		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 20.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 20.46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 20.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 20.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	01.23.18 20.46	
o-Terphenyl	84-15-1	107	%	70-135	01.23.18 20.46	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB5 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-030	Date Collected:	01.17.18 16.10	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.23.18 23.02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.23.18 23.02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.23.18 23.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.23.18 23.02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.23.18 23.02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.23.18 23.02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.23.18 23.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	80-120	01.23.18 23.02	
4-Bromofluorobenzene	460-00-4	92	%	80-120	01.23.18 23.02	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB5 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-031	Date Collected:	01.17.18 16.20	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.7**	4.97	mg/kg	01.23.18 17.59		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 21.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 21.47	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 21.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 21.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	01.23.18 21.47	
o-Terphenyl	84-15-1	117	%	70-135	01.23.18 21.47	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB5 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-031	Date Collected:	01.17.18 16.20	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.23.18 23.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.23.18 23.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.23.18 23.21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.23.18 23.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.23.18 23.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.23.18 23.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.23.18 23.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	80-120	01.23.18 23.21	
4-Bromofluorobenzene	460-00-4	84	%	80-120	01.23.18 23.21	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-032	Date Collected:	01.17.18 16.30	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	01.23.18 18.34	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 22.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 22.07	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 22.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 22.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	01.23.18 22.07	
o-Terphenyl	84-15-1	109	%	70-135	01.23.18 22.07	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-032	Date Collected:	01.17.18 16.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 08.30	Basis:	Wet Weight
Seq Number:	3039101				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.23.18 17.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.23.18 17.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.23.18 17.00	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.23.18 17.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.23.18 17.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.23.18 17.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.23.18 17.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	80-120	01.23.18 17.00	
1,4-Difluorobenzene	540-36-3	97	%	80-120	01.23.18 17.00	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-033	Date Collected:	01.17.18 16.40	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**404**	4.97	mg/kg	01.23.18 18.41		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 22.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 22.27	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 22.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 22.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.23.18 22.27	
o-Terphenyl	84-15-1	108	%	70-135	01.23.18 22.27	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-033	Date Collected:	01.17.18 16.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.18 04.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.18 04.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.18 04.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.18 04.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.18 04.58	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.24.18 04.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.18 04.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	80-120	01.24.18 04.58	
1,4-Difluorobenzene	540-36-3	97	%	80-120	01.24.18 04.58	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-034	Date Collected:	01.17.18 16.50	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1070**	4.99	mg/kg	01.23.18 18.48		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 22.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 22.50	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 22.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 22.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.23.18 22.50	
o-Terphenyl	84-15-1	99	%	70-135	01.23.18 22.50	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-034	Date Collected:	01.17.18 16.50	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.18 08.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.18 08.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.18 08.07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.24.18 08.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.18 08.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.18 08.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.18 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	80-120	01.24.18 08.07	
1,4-Difluorobenzene	540-36-3	98	%	80-120	01.24.18 08.07	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-035	Date Collected:	01.17.18 17.00	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**454**	4.96	mg/kg	01.23.18 18.55		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 23.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 23.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 23.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 23.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.23.18 23.10	
o-Terphenyl	84-15-1	107	%	70-135	01.23.18 23.10	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-035	Date Collected:	01.17.18 17.00	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.18 08.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.24.18 08.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.24.18 08.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.24.18 08.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.24.18 08.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.24.18 08.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.24.18 08.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	80-120	01.24.18 08.26	
1,4-Difluorobenzene	540-36-3	101	%	80-120	01.24.18 08.26	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-036	Date Collected:	01.17.18 17.10	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**121**	5.00	mg/kg	01.23.18 19.02		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 23.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 23.29	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 23.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 23.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.23.18 23.29	
o-Terphenyl	84-15-1	109	%	70-135	01.23.18 23.29	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-036	Date Collected:	01.17.18 17.10	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.24.18 16.00	Basis:	Wet Weight
Seq Number:	3039242				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00330	0.00330	mg/kg	01.24.18 20.08	U	1
Toluene	108-88-3	<0.00330	0.00330	mg/kg	01.24.18 20.08	U	1
Ethylbenzene	100-41-4	<0.00330	0.00330	mg/kg	01.24.18 20.08	U	1
m,p-Xylenes	179601-23-1	<0.00660	0.00660	mg/kg	01.24.18 20.08	U	1
o-Xylene	95-47-6	<0.00330	0.00330	mg/kg	01.24.18 20.08	U	1
Total Xylenes	1330-20-7	<0.00330	0.00330	mg/kg	01.24.18 20.08	U	1
Total BTEX		<0.00330	0.00330	mg/kg	01.24.18 20.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	80-120	01.24.18 20.08	
4-Bromofluorobenzene	460-00-4	90	%	80-120	01.24.18 20.08	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 10-12**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-037	Date Collected:	01.17.18 17.20	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**540**	5.00	mg/kg	01.23.18 19.09		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.23.18 23.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.23.18 23.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.23.18 23.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.23.18 23.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	01.23.18 23.49	
o-Terphenyl	84-15-1	108	%	70-135	01.23.18 23.49	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 10-12**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-037	Date Collected:	01.17.18 17.20	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.24.18 09.04	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.24.18 09.04	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.24.18 09.04	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.24.18 09.04	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.24.18 09.04	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.24.18 09.04	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.24.18 09.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	80-120	01.24.18 09.04	
1,4-Difluorobenzene	540-36-3	95	%	80-120	01.24.18 09.04	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 12-14**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-038	Date Collected:	01.17.18 17.30	Sample Depth:	14 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**162**	5.00	mg/kg	01.23.18 19.16		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 00.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 00.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 00.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 00.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	01.24.18 00.09	
o-Terphenyl	84-15-1	108	%	70-135	01.24.18 00.09	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 12-14**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-038	Date Collected:	01.17.18 17.30	Sample Depth:	14 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.24.18 16.00	Basis:	Wet Weight
Seq Number:	3039242				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00338	0.00338	mg/kg	01.24.18 20.27	U	1
Toluene	108-88-3	<0.00338	0.00338	mg/kg	01.24.18 20.27	U	1
Ethylbenzene	100-41-4	<0.00338	0.00338	mg/kg	01.24.18 20.27	U	1
m,p-Xylenes	179601-23-1	<0.00676	0.00676	mg/kg	01.24.18 20.27	U	1
o-Xylene	95-47-6	<0.00338	0.00338	mg/kg	01.24.18 20.27	U	1
Total Xylenes	1330-20-7	<0.00338	0.00338	mg/kg	01.24.18 20.27	U	1
Total BTEX		<0.00338	0.00338	mg/kg	01.24.18 20.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	80-120	01.24.18 20.27	
4-Bromofluorobenzene	460-00-4	90	%	80-120	01.24.18 20.27	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 14-16**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-039	Date Collected:	01.17.18 17.40	Sample Depth:	16 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**420**	5.00	mg/kg	01.23.18 19.23		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 00.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 00.30	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 00.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 00.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	01.24.18 00.30	
o-Terphenyl	84-15-1	97	%	70-135	01.24.18 00.30	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB6 14-16**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-039	Date Collected:	01.17.18 17.40	Sample Depth:	16 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.24.18 16.00	Basis:	Wet Weight
Seq Number:	3039242				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00346	0.00346	mg/kg	01.24.18 20.46	U	1
Toluene	108-88-3	<0.00346	0.00346	mg/kg	01.24.18 20.46	U	1
Ethylbenzene	100-41-4	<0.00346	0.00346	mg/kg	01.24.18 20.46	U	1
m,p-Xylenes	179601-23-1	<0.00692	0.00692	mg/kg	01.24.18 20.46	U	1
o-Xylene	95-47-6	<0.00346	0.00346	mg/kg	01.24.18 20.46	U	1
Total Xylenes	1330-20-7	<0.00346	0.00346	mg/kg	01.24.18 20.46	U	1
Total BTEX		<0.00346	0.00346	mg/kg	01.24.18 20.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	80-120	01.24.18 20.46	
1,4-Difluorobenzene	540-36-3	95	%	80-120	01.24.18 20.46	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB7 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-040	Date Collected:	01.18.18 08.00	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.82	9.82	mg/kg	02.23.18 23.12	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB7 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-041	Date Collected:	01.18.18 08.10	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.86	9.86	mg/kg	02.23.18 23.22	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB7 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-042	Date Collected:	01.18.18 08.20	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	02.23.18 23.33	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB7 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-043	Date Collected:	01.18.18 08.30	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.78	9.78	mg/kg	02.23.18 23.43	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB7 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-044	Date Collected:	01.18.18 08.40	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.82	9.82	mg/kg	02.23.18 23.54	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-045	Date Collected:	01.18.18 08.50	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 12.00	Basis:	Wet Weight
Seq Number:	3039239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	01.23.18 19.44	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039134				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 00.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 00.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 00.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 00.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.24.18 00.52	
o-Terphenyl	84-15-1	95	%	70-135	01.24.18 00.52	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-045	Date Collected:	01.18.18 08.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.24.18 10.01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.24.18 10.01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.24.18 10.01	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.24.18 10.01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.24.18 10.01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.24.18 10.01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.24.18 10.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	80-120	01.24.18 10.01	
1,4-Difluorobenzene	540-36-3	96	%	80-120	01.24.18 10.01	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-046	Date Collected:	01.18.18 09.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 16.45	Basis:	Wet Weight
Seq Number:	3039235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	01.23.18 20.12	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039135				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 02.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 02.34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 02.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 02.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.24.18 02.34	
o-Terphenyl	84-15-1	103	%	70-135	01.24.18 02.34	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-046	Date Collected:	01.18.18 09.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.18 02.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.18 02.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.18 02.09	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.24.18 02.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.18 02.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.18 02.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.18 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	01.24.18 02.09	
4-Bromofluorobenzene	460-00-4	89	%	80-120	01.24.18 02.09	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-047	Date Collected:	01.18.18 09.10	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 16.45	Basis:	Wet Weight
Seq Number:	3039235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.60**	4.98	mg/kg	01.23.18 20.33		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039135				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 03.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 03.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 03.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 03.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	01.24.18 03.32	
o-Terphenyl	84-15-1	117	%	70-135	01.24.18 03.32	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-047	Date Collected:	01.18.18 09.10	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.18 02.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.18 02.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.18 02.28	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.24.18 02.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.18 02.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.18 02.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.18 02.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	80-120	01.24.18 02.28	
1,4-Difluorobenzene	540-36-3	98	%	80-120	01.24.18 02.28	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-048	Date Collected:	01.18.18 09.20	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 16.45	Basis:	Wet Weight
Seq Number:	3039235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.23.18 20.40	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039135				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 03.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 03.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 03.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 03.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.24.18 03.52	
o-Terphenyl	84-15-1	107	%	70-135	01.24.18 03.52	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-048	Date Collected:	01.18.18 09.20	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.18 02.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.24.18 02.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.24.18 02.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.24.18 02.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.24.18 02.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.24.18 02.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.24.18 02.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	80-120	01.24.18 02.46	
1,4-Difluorobenzene	540-36-3	94	%	80-120	01.24.18 02.46	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 8-10 (1)**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-049	Date Collected:	01.18.18 09.30	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 16.45	Basis:	Wet Weight
Seq Number:	3039235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.23.18 20.47	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039135				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 04.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 04.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 04.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 04.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	01.24.18 04.12	
o-Terphenyl	84-15-1	107	%	70-135	01.24.18 04.12	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 8-10 (1)**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-049	Date Collected:	01.18.18 09.30	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.18 03.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.24.18 03.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.24.18 03.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.24.18 03.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.24.18 03.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.24.18 03.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.24.18 03.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	80-120	01.24.18 03.05	
1,4-Difluorobenzene	540-36-3	96	%	80-120	01.24.18 03.05	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB9 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-050	Date Collected:	01.18.18 10.15	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**238**	9.90	mg/kg	02.24.18 00.04		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB9 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-051	Date Collected:	01.18.18 10.20	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**486**	9.88	mg/kg	02.24.18 00.15		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB9 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-052	Date Collected:	01.18.18 10.30	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.8**	9.84	mg/kg	02.24.18 00.25		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB9 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-053	Date Collected:	01.18.18 10.40	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.5**	9.92	mg/kg	02.24.18 00.57		1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB9 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-054	Date Collected:	01.18.18 10.50	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.86	9.86	mg/kg	02.26.18 15.00	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-055	Date Collected:	01.18.18 11.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 16.45	Basis:	Wet Weight
Seq Number:	3039235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	01.23.18 21.07	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039135				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 04.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 04.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 04.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 04.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	01.24.18 04.32	
o-Terphenyl	84-15-1	113	%	70-135	01.24.18 04.32	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 0-2**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-055	Date Collected:	01.18.18 11.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.18 03.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.18 03.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.18 03.24	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.24.18 03.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.18 03.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.18 03.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.18 03.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	80-120	01.24.18 03.24	
4-Bromofluorobenzene	460-00-4	83	%	80-120	01.24.18 03.24	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-056	Date Collected:	01.18.18 11.10	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 16.45	Basis:	Wet Weight
Seq Number:	3039235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	01.23.18 21.14	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039135				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 04.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 04.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 04.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 04.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.24.18 04.52	
o-Terphenyl	84-15-1	107	%	70-135	01.24.18 04.52	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 2-4**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-056	Date Collected:	01.18.18 11.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.24.18 03.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.24.18 03.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.24.18 03.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.24.18 03.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.24.18 03.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.24.18 03.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.24.18 03.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	01.24.18 03.43	
4-Bromofluorobenzene	460-00-4	90	%	80-120	01.24.18 03.43	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-057	Date Collected:	01.18.18 11.20	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 16.45	Basis:	Wet Weight
Seq Number:	3039235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.70**	5.01	mg/kg	01.23.18 21.21		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039135				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 05.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 05.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 05.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 05.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	01.24.18 05.14	
o-Terphenyl	84-15-1	108	%	70-135	01.24.18 05.14	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 4-6**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-057	Date Collected:	01.18.18 11.20	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.18 04.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.18 04.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.18 04.02	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.24.18 04.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.18 04.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.18 04.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.18 04.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	80-120	01.24.18 04.02	
1,4-Difluorobenzene	540-36-3	93	%	80-120	01.24.18 04.02	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-058	Date Collected:	01.18.18 11.30	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 16.45	Basis:	Wet Weight
Seq Number:	3039235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	01.23.18 21.28	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039135				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 05.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 05.35	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 05.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 05.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.24.18 05.35	
o-Terphenyl	84-15-1	104	%	70-135	01.24.18 05.35	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-058	Date Collected:	01.18.18 11.30	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.24.18 04.20	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.24.18 04.20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.24.18 04.20	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.24.18 04.20	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.24.18 04.20	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.24.18 04.20	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.24.18 04.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	80-120	01.24.18 04.20	
1,4-Difluorobenzene	540-36-3	97	%	80-120	01.24.18 04.20	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-059	Date Collected:	01.18.18 11.40	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.23.18 16.45	Basis:	Wet Weight
Seq Number:	3039235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.61**	5.01	mg/kg	01.23.18 21.35		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	01.23.18 14.00	Basis:	Wet Weight
Seq Number:	3039135				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.24.18 05.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.24.18 05.55	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.24.18 05.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.24.18 05.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.24.18 05.55	
o-Terphenyl	84-15-1	108	%	70-135	01.24.18 05.55	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB10 8-10**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-059	Date Collected:	01.18.18 11.40	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.23.18 17.00	Basis:	Wet Weight
Seq Number:	3039105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.18 04.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.18 04.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.18 04.39	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.24.18 04.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.18 04.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.18 04.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.18 04.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	80-120	01.24.18 04.39	
1,4-Difluorobenzene	540-36-3	95	%	80-120	01.24.18 04.39	

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB4 4-6 (2)**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-060	Date Collected:	01.18.18 11.40	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	02.24.18 01.07	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**BG 6-8**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-061	Date Collected:	01.18.18 11.40	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	02.24.18 01.18	U	1

Certificate of Analytical Results 573941

OWL SWD Operating LLC, Dallas, TX

IRP-4820

Sample Id:	**SB8 8-10 (2)**	Matrix:	Soil	Date Received:	01.18.18 17.00
Lab Sample Id:	573941-062	Date Collected:	01.18.18 11.40	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.23.18 07.29	Basis:	Wet Weight
Seq Number:	3042055			SUB:	TX104704215-18-24

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	02.24.18 01.28	U	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 Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

QC Summary 573941

OWL SWD Operating LLC

IRP-4820

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3039239 Matrix: Solid Date Prep: 01.23.18
MB Sample Id: 7637928-1-BLK LCS Sample Id: 7637928-1-BKS LCSD Sample Id: 7637928-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	253	101	255	102	90-110	1	20	mg/kg	01.23.18 15:39	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3039235 Matrix: Solid Date Prep: 01.23.18
MB Sample Id: 7637929-1-BLK LCS Sample Id: 7637929-1-BKS LCSD Sample Id: 7637929-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	261	104	252	101	90-110	4	20	mg/kg	01.23.18 19:58	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042055 Matrix: Solid Date Prep: 02.23.18
MB Sample Id: 7639700-1-BLK LCS Sample Id: 7639700-1-BKS LCSD Sample Id: 7639700-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	100	98.8	99	99.1	99	80-120	0	20	mg/kg	02.23.18 20:56	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042053 Matrix: Solid Date Prep: 02.23.18
MB Sample Id: 7639692-1-BLK LCS Sample Id: 7639692-1-BKS LCSD Sample Id: 7639692-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	100	99.6	100	98.8	99	80-120	1	20	mg/kg	02.23.18 11:04	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042112 Matrix: Solid Date Prep: 02.26.18
MB Sample Id: 7639761-1-BLK LCS Sample Id: 7639761-1-BKS LCSD Sample Id: 7639761-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	100	104	104	104	104	80-120	0	20	mg/kg	02.26.18 11:38	

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

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

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 573941

OWL SWD Operating LLC

IRP-4820

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3039239 Matrix: Soil Date Prep: 01.23.18
Parent Sample Id: 573941-012 MS Sample Id: 573941-012 S MSD Sample Id: 573941-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1220	250	1340	48	1390	68	90-110	4	20	mg/kg	01.23.18 16:28	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3039239 Matrix: Soil Date Prep: 01.23.18
Parent Sample Id: 573941-031 MS Sample Id: 573941-031 S MSD Sample Id: 573941-031 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.7	249	248	90	279	103	90-110	12	20	mg/kg	01.23.18 18:20	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3039235 Matrix: Soil Date Prep: 01.23.18
Parent Sample Id: 573941-046 MS Sample Id: 573941-046 S MSD Sample Id: 573941-046 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.02	251	262	104	271	108	90-110	3	20	mg/kg	01.23.18 20:19	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3039235 Matrix: Soil Date Prep: 01.23.18
Parent Sample Id: 573970-001 MS Sample Id: 573970-001 S MSD Sample Id: 573970-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	910	249	1180	108	1140	92	90-110	3	20	mg/kg	01.23.18 21:56	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042055 Matrix: Soil Date Prep: 02.23.18
Parent Sample Id: 573941-020 MS Sample Id: 573941-020 S MSD Sample Id: 573941-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.5	98.8	116	97	117	97	80-120	1	20	mg/kg	02.23.18 21:27	

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

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

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 573941

OWL SWD Operating LLC

IRP-4820

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042053 Matrix: Soil Date Prep: 02.23.18
Parent Sample Id: 573941-001 MS Sample Id: 573941-001 S MSD Sample Id: 573941-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.92	99.2	103	104	103	104	80-120	0	20	mg/kg	02.23.18 18:08	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042053 Matrix: Sludge Date Prep: 02.23.18
Parent Sample Id: 577090-001 MS Sample Id: 577090-001 S MSD Sample Id: 577090-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.98	99.8	101	101	101	101	80-120	0	20	mg/kg	02.23.18 14:10	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042112 Matrix: Soil Date Prep: 02.26.18
Parent Sample Id: 573941-016 MS Sample Id: 573941-016 S MSD Sample Id: 573941-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.96	99.6	111	111	111	111	80-120	0	20	mg/kg	02.26.18 12:56	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3039134 Matrix: Solid Date Prep: 01.23.18
MB Sample Id: 7637987-1-BLK LCS Sample Id: 7637987-1-BKS LCSD Sample Id: 7637987-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	855	86	1000	100	70-135	16	35	mg/kg	01.23.18 16:27	
Diesel Range Organics (DRO)	<15.0	1000	969	97	1130	113	70-135	15	35	mg/kg	01.23.18 16:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		110		124		70-135	%	01.23.18 16:27
o-Terphenyl	115		119		122		70-135	%	01.23.18 16:27

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

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

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 573941

OWL SWD Operating LLC

IRP-4820

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3039135 Matrix: Solid Date Prep: 01.23.18
MB Sample Id: 7637989-1-BLK LCS Sample Id: 7637989-1-BKS LCSD Sample Id: 7637989-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	842	84	828	83	70-135	2	35	mg/kg	01.24.18 01:53	
Diesel Range Organics (DRO)	<15.0	1000	971	97	931	93	70-135	4	35	mg/kg	01.24.18 01:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		111		113		70-135	%	01.24.18 01:53
o-Terphenyl	102		103		115		70-135	%	01.24.18 01:53

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3039134 Matrix: Soil Date Prep: 01.23.18
Parent Sample Id: 573941-010 MS Sample Id: 573941-010 S MSD Sample Id: 573941-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	892	89	860	86	70-135	4	35	mg/kg	01.23.18 17:26	
Diesel Range Organics (DRO)	<15.0	1000	984	98	967	97	70-135	2	35	mg/kg	01.23.18 17:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		117		70-135	%	01.23.18 17:26
o-Terphenyl	129		126		70-135	%	01.23.18 17:26

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3039135 Matrix: Soil Date Prep: 01.23.18
Parent Sample Id: 573941-046 MS Sample Id: 573941-046 S MSD Sample Id: 573941-046 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	925	93	981	98	70-135	6	35	mg/kg	01.24.18 02:53	
Diesel Range Organics (DRO)	<15.0	999	1040	104	1080	108	70-135	4	35	mg/kg	01.24.18 02:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		119		70-135	%	01.24.18 02:53
o-Terphenyl	128		124		70-135	%	01.24.18 02:53

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

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

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 573941

OWL SWD Operating LLC

IRP-4820

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3039101 — Matrix: Solid — Date Prep: 01.23.18
MB Sample Id: 7637968-1-BLK — LCS Sample Id: 7637968-1-BKS — LCSD Sample Id: 7637968-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.101	101	0.0940	94	70-130	7	35	mg/kg	01.23.18 14:18	
Toluene	<0.00200	0.0998	0.0911	91	0.0896	90	70-130	2	35	mg/kg	01.23.18 14:18	
Ethylbenzene	<0.00200	0.0998	0.0890	89	0.0863	86	71-129	3	35	mg/kg	01.23.18 14:18	
m,p-Xylenes	<0.00399	0.200	0.176	88	0.173	87	70-135	2	35	mg/kg	01.23.18 14:18	
o-Xylene	<0.00200	0.0998	0.0892	89	0.0868	87	71-133	3	35	mg/kg	01.23.18 14:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		106		103		80-120	%	01.23.18 14:18
4-Bromofluorobenzene	84		93		94		80-120	%	01.23.18 14:18

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3039105 — Matrix: Solid — Date Prep: 01.23.18
MB Sample Id: 7637970-1-BLK — LCS Sample Id: 7637970-1-BKS — LCSD Sample Id: 7637970-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0891	89	0.0941	93	70-130	5	35	mg/kg	01.23.18 23:58	
Toluene	<0.00200	0.100	0.0867	87	0.0915	91	70-130	5	35	mg/kg	01.23.18 23:58	
Ethylbenzene	<0.00200	0.100	0.0825	83	0.0884	88	71-129	7	35	mg/kg	01.23.18 23:58	
m,p-Xylenes	<0.00401	0.200	0.165	83	0.177	88	70-135	7	35	mg/kg	01.23.18 23:58	
o-Xylene	<0.00200	0.100	0.0841	84	0.0906	90	71-133	7	35	mg/kg	01.23.18 23:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		102		112		80-120	%	01.23.18 23:58
4-Bromofluorobenzene	90		88		107		80-120	%	01.23.18 23:58

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3039242 — Matrix: Solid — Date Prep: 01.24.18
MB Sample Id: 7638039-1-BLK — LCS Sample Id: 7638039-1-BKS — LCSD Sample Id: 7638039-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0952	95	0.0956	96	70-130	0	35	mg/kg	01.24.18 16:35	
Toluene	<0.00200	0.100	0.0980	98	0.0980	98	70-130	0	35	mg/kg	01.24.18 16:35	
Ethylbenzene	<0.00200	0.100	0.104	104	0.104	104	71-129	0	35	mg/kg	01.24.18 16:35	
m,p-Xylenes	<0.00401	0.200	0.205	103	0.206	104	70-135	0	35	mg/kg	01.24.18 16:35	
o-Xylene	<0.00200	0.100	0.101	101	0.102	102	71-133	1	35	mg/kg	01.24.18 16:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		94		93		80-120	%	01.24.18 16:35
4-Bromofluorobenzene	88		99		98		80-120	%	01.24.18 16:35

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

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

OWL SWD Operating LLC

IRP-4820

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3039101 | Matrix: Soil | Date Prep: 01.23.18
Parent Sample Id: 573941-028 | MS Sample Id: 573941-028 S | MSD Sample Id: 573941-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0908	90	0.0854	85	70-130	6	35	mg/kg	01.23.18 15:04	
Toluene	<0.00202	0.101	0.0888	88	0.0824	82	70-130	7	35	mg/kg	01.23.18 15:04	
Ethylbenzene	<0.00202	0.101	0.0871	86	0.0772	77	71-129	12	35	mg/kg	01.23.18 15:04	
m,p-Xylenes	<0.00404	0.202	0.174	86	0.155	77	70-135	12	35	mg/kg	01.23.18 15:04	
o-Xylene	<0.00202	0.101	0.0861	85	0.0774	77	71-133	11	35	mg/kg	01.23.18 15:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	119		112		80-120	%	01.23.18 15:04
4-Bromofluorobenzene	110		113		80-120	%	01.23.18 15:04

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3039105 | Matrix: Soil | Date Prep: 01.23.18
Parent Sample Id: 573941-046 | MS Sample Id: 573941-046 S | MSD Sample Id: 573941-046 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0649	65	0.0649	64	70-130	0	35	mg/kg	01.24.18 11:41	X
Toluene	<0.00200	0.100	0.0618	62	0.0710	70	70-130	14	35	mg/kg	01.24.18 11:41	X
Ethylbenzene	<0.00200	0.100	0.0594	59	0.0575	57	71-129	3	35	mg/kg	01.24.18 11:41	X
m,p-Xylenes	<0.00401	0.200	0.119	60	0.102	50	70-135	15	35	mg/kg	01.24.18 11:41	X
o-Xylene	<0.00200	0.100	0.0593	59	0.0695	69	71-133	16	35	mg/kg	01.24.18 11:41	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		112		80-120	%	01.24.18 11:41
4-Bromofluorobenzene	91		115		80-120	%	01.24.18 11:41

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3039242 | Matrix: Soil | Date Prep: 01.24.18
Parent Sample Id: 574310-001 | MS Sample Id: 574310-001 S | MSD Sample Id: 574310-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0792	78	0.0797	79	70-130	1	35	mg/kg	01.24.18 17:13	
Toluene	<0.00201	0.101	0.0807	80	0.0807	80	70-130	0	35	mg/kg	01.24.18 17:13	
Ethylbenzene	<0.00201	0.101	0.0812	80	0.0807	80	71-129	1	35	mg/kg	01.24.18 17:13	
m,p-Xylenes	<0.00402	0.201	0.160	80	0.159	79	70-135	1	35	mg/kg	01.24.18 17:13	
o-Xylene	<0.00201	0.101	0.0799	79	0.0789	78	71-133	1	35	mg/kg	01.24.18 17:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		87		80-120	%	01.24.18 17:13
4-Bromofluorobenzene	104		100		80-120	%	01.24.18 17:13

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

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

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

CHAIN OF CUSTODY

Revision 2016.1

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Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550
www.xenco.com

Xenco Quote #: | Xenco Job #: 573941

Client / Reporting Information

Company Name / Branch: OWL SWD Operating, LLC
Company Address: 8214 Westchester Dr #850 Dallas, TX 75225
Email: psanders@oilfieldwaterlogistics.com | Phone No:
Project Contact: Phillip Sanders 210-906-3554
Samplers's Name: James Fox

Project Information

Project Name/Number: IRP-4820 / OWL091317D
Project Location: Jal, NM
Invoice To: OWL
PO Number:

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH	BTEX	Chlorides	Field Comments
1	BG 0-2	2'	1-17-18	1030	S	2								X	X	X	X	* Please hold all
2	BG 2-4	4'		1040														samples until
3	BG 4-6	6'		1050														approved to run
4	SB1 0-2	2'		1130														analysis
5	SB1 2-4	4'		1140														
6	SB1 4-6	6'		1150														
7	SB1 6-8	8'		1200														
8	SB1 8-10	10'		1210														
9	SB1 10-11.5	11.5'		1220														
10	SB2 0-2	2'		1230														

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

FED-E

Notes:

* Please email reports to:
james@kjenvironmental.com
dena@kjenvironmental.com

Temp: 2.2°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.0°C

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:
1	James Fox	1-18-18 1700		2	
3	Relinquished by:	Date Time:	Received By:	Relinquished By: 4	Date Time:
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable / On Ice / Cooler Temp. / Thermo. Corr. Factor

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 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 invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

CHAIN OF CUSTODY

Page 2 Of 6

Revision 2016.1

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Xenco Quote #

Xenco Job # 573941

Client / Reporting Information

Company Name / Branch:

Company Address: See page #1

Email: Phone No:

Project Contact:

Samplers's Name:

Project Information

Project Name/Number: IRP-4820 / OWL 091317D

Project Location: Jal, NM

Invoice To: OWL

PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chlorides	Field Comments
1	SB2 2-4	4'	1.17.18	1240	S	2								X	X	X	X	* See page #1
2	SB2 4-6	6'		1250														
3	SB2 6-8	8'		1300														
4	SB2 8-10	10'		1310														
5	SB2 10-11	11'		1320														
6	SB3 0-2	2'		1400														
7	SB3 2-4	4'		1410														
8	SB3 4-6	6'		1420														
9	SB3 6-8	8'		1430														
10	SB3 8-10	10'		1440														

Turnaround Time (Business days)

- [ ] Same Day TAT
- [X] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

* See page #1

FED-EX

Temp: 2.2°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.0°C

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:
1	[signature]	1.18.18 1700	1 [signature]	2	
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable / On Ice / Cooler Temp. / Thermo. Corr. Factor

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 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 invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

CHAIN OF CUSTODY

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Xenco Quote # | Xenco Job # 573941

Client / Reporting Information

Company Name / Branch:

Company Address: See page #1

Email: Phone No:

Project Contact:

Samplers's Name:

Project Information

Project Name/Number: IRP-4820 / OWL 0913170

Project Location: Jal, NM

Invoice To: owl

PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
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SL - Sludge
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WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chlorides	Field Comments
1	SB3 10-11	11'	1.17.18	1450	S	2								X	X	X	X	See pg. #1
2	SB4 0-2	2'		1455														
3	SB4 2-4	4'		1500														
4	SB4 4-6	6'		1510														
5	SB4 6-8	8'		1520														
6	SB4 8-10	10'		1530														
7	SB5 0-2	2'		1545														
8	SB5 2-4	4'		1555														
9	SB5 4-6	6'		1600														
10	SB5 6-8	8'		1610														

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

FED-I

Notes:

See page #1

Temp: 2.2°c IR ID:R-8

CF:(0-6: -0.2°C)

(6-23: +0.2°C)

Corrected Temp: 2.0°c

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1.18.18 1700		2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 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 invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

CHAIN OF CUSTODY

Revision 2016.1

XENCO LABORATORIES

Setting the Standard since 1990

Page 4 Of 6

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote # | Xenco Job # 573941

Client / Reporting Information

Company Name / Branch:
Company Address:
Email: See page #1 Phone No:
Project Contact:
Samplers's Name:

Project Information

Project Name/Number: IRP-4820 / OWL 091317D
Project Location: Jal, NM
Invoice To: OWL
PO Number:

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH	BTEX	Chlorides	Field Comments
1	SB5 8-10	10'	1.17.18	1620	S	2								X	X	X	X	See pg #1
2	SB6 0-2	2'		1630														
3	SB6 2-4	4'		1640														
4	SB6 4-6	6'		1650														
5	SB6 6-8	8'		1700														
6	SB6 8-10	10'		1710														
7	SB6 10-12	12'		1720														
8	SB6 12-14	14'		1730														
9	SB6 14-16	16'		1740														
10	SB7 0-2	2'	1.18.18	0800														

Turnaround Time (Business days)

- [ ] Same Day TAT
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FEI

Notes:

* See page #1

Temp: 2.2°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.0°C

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1.18.18 1300	1	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
			5			

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CHAIN OF CUSTODY

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www.xenco.com

Xenco Quote # | Xenco Job # 573941

Client / Reporting Information

Company Name / Branch:
Company Address:
Email: See pg #1 Phone No:
Project Contact:
Samplers's Name:

Project Information

Project Name/Number: IRP-4820 / OWL 091317D
Project Location: Jal, NM
Invoice To: OWL
PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chlorides	Field Comments
1	SB7 2-4	4'	1.18.18	0810	S	2								X	X	X	X	See pg #1
2	SB7 4-6	6'		0820														
3	SB7 6-8	8'		0830														
4	SB7 8-10	10'		0840														
5	SB8 0-2	2'		0850														
6	SB8 2-4	4'		0900														
7	SB8 4-6	6'		0910														
8	SB8 6-8	8'		0920														
9	SB8 8-10	10'		0930														
10	SB9 0-2	2'	↓	1015	↓	↓								↓	↓	↓	↓	

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FED-EX

Notes:

See pg #1

Temp: 2.2°C IR ID:R-8
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(6-23: +0.2°C)
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1		1.18.18 1700		2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
			5			

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www.xenco.com

Xenco Quote #

Xenco Job # 573941

Client / Reporting Information

Company Name / Branch:

Company Address: See page #1

Email: Phone No:

Project Contact:

Samplers's Name:

Project Information

Project Name/Number: IRP-9820 / ow2 09/3170

Project Location: Jal, NM

Invoice To: ow2

PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chlorides	Field Comments
1	SB9 2-4	4'	1.18.18	1020	S	2								X	X	X	X	See pg #1
2	SB9 4-6	6'		1030														
3	SB9 6-8	8'		1040														
4	SB9 8-10	10'		1050														
5	SB10 0-2	2'		1100														
6	SB10 2-4	4'		1110														
7	SB10 4-6	6'		1120														
8	SB10 6-8	8'		1130														
9	SB10 8-10	10'	↓	1140	↓	↓								↓	↓	↓	↓	
10																		

Turnaround Time (Business days)

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- ☐ Level II Report with TRRP checklist

Notes:

See page #1

Temp: 2.2°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.0°C

FED-EX / UPS: Tr

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1.18.18 1700	1	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

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Inter-Office Shipment

IOS Number **1056555**

Date/Time: 02/22/18 16:10
Lab# From: **Midland**
Lab# To: **Houston**

Created by: Jessica Kramer
Delivery Priority:
Air Bill No.: 771548848886

Please send report to: Kelsey Brooks
Address: 1211 W. Florida Ave, Midland TX 79701
Phone:
E-Mail: kelsey.brooks@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
573941-001	S	BG 0-2	01/17/18 10:30	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-002	S	BG 2-4	01/17/18 10:40	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-003	S	BG 4-6	01/17/18 10:50	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-004	S	SB1 0-2	01/17/18 11:30	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-005	S	SB1 2-4	01/17/18 11:40	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-006	S	SB1 4-6	01/17/18 11:50	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-007	S	SB1 6-8	01/17/18 12:00	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-008	S	SB1 8-10	01/17/18 12:10	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-009	S	SB1 10-11.51	01/17/18 12:20	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-016	S	SB3 0-2	01/17/18 14:00	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-017	S	SB3 2-4	01/17/18 14:10	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-018	S	SB3 4-6	01/17/18 14:20	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-019	S	SB3 6-8	01/17/18 14:30	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-020	S	SB3 8-10	01/17/18 14:40	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-021	S	SB3 10-11	01/17/18 14:50	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-022	S	SB4 0-2	01/17/18 14:55	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-023	S	SB4 2-4	01/17/18 15:00	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-024	S	SB4 4-6 (1)	01/17/18 15:10	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-025	S	SB4 6-8	01/17/18 15:20	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-026	S	SB4 8-10	01/17/18 15:30	E300_CL	Chloride by EPA 300	01/24/18	02/14/18	KEB	CL	
573941-040	S	SB7 0-2	01/18/18 08:00	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-041	S	SB7 2-4	01/18/18 08:10	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-042	S	SB7 4-6	01/18/18 08:20	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-043	S	SB7 6-8	01/18/18 08:30	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-044	S	SB7 8-10	01/18/18 08:40	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	

Inter-Office Shipment

IOS Number **1056555**

Date/Time: 02/22/18 16:10
Lab# From: **Midland**
Lab# To: **Houston**

Created by: Jessica Kramer
Delivery Priority:
Air Bill No.: 771548848886

Please send report to: Kelsey Brooks
Address: 1211 W. Florida Ave, Midland TX 79701
Phone:
E-Mail: kelsey.brooks@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
573941-050	S	SB9 0-2	01/18/18 10:15	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-051	S	SB9 2-4	01/18/18 10:20	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-052	S	SB9 4-6	01/18/18 10:30	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-053	S	SB9 6-8	01/18/18 10:40	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-054	S	SB9 8-10	01/18/18 10:50	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-060	S	SB4 4-6 (2)	01/18/18 11:40	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-061	S	BG 6-8	01/18/18 11:40	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	
573941-062	S	SB8 8-10 (2)	01/18/18 11:40	E300_CL	Chloride by EPA 300	01/24/18	02/15/18	KEB	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Jessica Kramer
Jessica Kramer

Date Relinquished: 02/22/2018

Received By: Maria Paula Guerra
Maria Paula Guerra

Date Received: 02/23/2018 09:15

Cooler Temperature: 3.9

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 1056555

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR:HOU068

Sent By: Jessica Kramer **Date Sent:** 02/22/2018 04:10 PM

Received By: Maria Paula Guerra **Date Received:** 02/23/2018 09:15 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.9	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#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?	**No**	pH out of hold

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: mPaula Guerra Date: 02/23/2018

Maria Paula Guerra

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: OWL SWD Operating LLC

Date/ Time Received: 01/18/2018 05:00:00 PM

Work Order #: 573941

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

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2	
#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?	**Yes**	Sample 60- SB4 4-6 (2) , 61- BG 6-8 and 62- SB8 8-10 (2) were not on COC
#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: Connie Hernandez Date: 01/19/2018

Checklist reviewed by: Kelsey Brooks Date: 01/23/2018

Certificate of Analysis Summary 574342

OWL SWD Operating LLC, Dallas, TX

Project Name: OWL091317D

Project Id: IRP-4820
Contact: Phillip Sanders
Project Location: JAL,NM

Date Received in Lab: Wed Jan-24-18 08:20 am
Report Date: 19-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	574342-001		574342-002		574342-003		574342-004		574342-005		574342-006	
	Field Id:	SB11 0-2 (1)		SB11 0-2 (2)		SB11 2-4		SB11 4-6		SB11 6-8		SB11 8-10	
	Depth:	2- ft		2- ft		4- ft		6- ft		8- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-23-18 09:30		Jan-23-18 09:35		Jan-23-18 09:40		Jan-23-18 09:45		Jan-23-18 09:50		Jan-23-18 09:55	
Chloride by EPA 300	***Extracted:***	Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00	
	Analyzed:	Feb-15-18 23:27		Feb-15-18 23:32		Feb-15-18 23:37		Feb-15-18 23:43		Feb-16-18 00:00		Feb-16-18 00:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.00	5.00	<5.00	5.00	<5.00	5.00	<5.00	5.00	<5.00	5.00	<5.00	5.00

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Kelsey Brooks
Project Manager

Certificate of Analysis Summary 574342

OWL SWD Operating LLC, Dallas, TX

Project Name: OWL091317D

Project Id: IRP-4820
Contact: Phillip Sanders
Project Location: JAL,NM

Date Received in Lab: Wed Jan-24-18 08:20 am
Report Date: 19-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	574342-007		574342-008		574342-009		574342-010		574342-011		574342-012	
	Field Id:	SB11 10-11		SB12 0-2		SB12 2-4		SB12 4-6		SB12 6-8		SB12 8-10	
	Depth:	11- ft		2- ft		4- ft		6- ft		8- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-23-18 09:59		Jan-23-18 10:15		Jan-23-18 10:20		Jan-23-18 10:30		Jan-23-18 10:35		Jan-23-18 10:40	
Chloride by EPA 300	***Extracted:***	Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00	
	Analyzed:	Feb-16-18 00:10		Feb-16-18 00:16		Feb-16-18 00:21		Feb-16-18 00:26		Feb-16-18 00:42		Feb-16-18 00:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.00	5.00	<5.00	5.00	<5.00	5.00	<5.00	5.00	8.43	5.00	22.6	5.00

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Kelsey Brooks
Project Manager

Certificate of Analysis Summary 574342

OWL SWD Operating LLC, Dallas, TX

Project Name: OWL091317D

Project Id: IRP-4820
Contact: Phillip Sanders
Project Location: JAL,NM

Date Received in Lab: Wed Jan-24-18 08:20 am
Report Date: 19-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	574342-013		574342-014		574342-015		574342-016		574342-017		574342-018	
	Field Id:	SB12 10-11		SB13 0-2		SB13 2-4		SB13 4-6		SB13 6-8		SB13 8-10	
	Depth:	11- ft		2- ft		4- ft		6- ft		8- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-23-18 10:50		Jan-23-18 11:15		Jan-23-18 11:20		Jan-23-18 11:30		Jan-23-18 11:40		Jan-23-18 11:50	
Chloride by EPA 300	***Extracted:***	Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00		Feb-15-18 18:00	
	Analyzed:	Feb-16-18 01:05		Feb-16-18 01:10		Feb-16-18 01:15		Feb-16-18 01:21		Feb-16-18 01:26		Feb-16-18 01:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		40.2	5.00	<5.00	5.00	<5.00	5.00	<5.00	5.00	<5.00	5.00	<5.00	5.00

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Kelsey Brooks
Project Manager

Certificate of Analysis Summary 574342

OWL SWD Operating LLC, Dallas, TX

Project Name: OWL091317D

Project Id: IRP-4820
Contact: Phillip Sanders
Project Location: JAL,NM

Date Received in Lab: Wed Jan-24-18 08:20 am
Report Date: 19-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	574342-019		574342-020		574342-021		574342-022		574342-023		574342-024	
	Field Id:	SB13 10-11		SB14 0-2		SB14 2-4		SB14 4-6		SB14 6-8		SB14 8-10 (1)	
	Depth:	11- ft		2- ft		4- ft		6- ft		8- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-23-18 12:00		Jan-23-18 12:30		Jan-23-18 12:40		Jan-23-18 12:50		Jan-23-18 13:00		Jan-23-18 13:05	
Chloride by EPA 300	***Extracted:***	Feb-15-18 18:00		Feb-16-18 11:00		Feb-16-18 11:00		Feb-16-18 11:00		Feb-16-18 11:00		Feb-16-18 11:00	
	Analyzed:	Feb-16-18 01:36		Feb-16-18 13:51		Feb-16-18 14:07		Feb-16-18 14:12		Feb-16-18 14:17		Feb-16-18 14:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.00	5.00	<4.99	4.99	15.3	5.00	28.2	4.97	42.0	4.97	106	4.92

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Kelsey Brooks
Project Manager

Certificate of Analysis Summary 574342

OWL SWD Operating LLC, Dallas, TX

Project Name: OWL091317D

Project Id: IRP-4820
Contact: Phillip Sanders
Project Location: JAL,NM

Date Received in Lab: Wed Jan-24-18 08:20 am
Report Date: 19-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	574342-025					
	Field Id:	SB14 8-10 (2)					
	Depth:	10- ft					
	Matrix:	SOIL					
	Sampled:	Jan-23-18 13:05					
Chloride by EPA 300	***Extracted:***	Feb-16-18 11:00					
	Analyzed:	Feb-16-18 14:39					
	Units/RL:	mg/kg	RL				
Chloride		119	4.99				

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Kelsey Brooks
Project Manager

Analytical Report 574342

for

OWL SWD Operating LLC

Project Manager: Phillip Sanders

OWL091317D

IRP-4820

19-FEB-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

19-FEB-18

Project Manager: **Phillip Sanders**
OWL SWD Operating LLC
8214 Westchester Dr. Suite 850
Dallas, TX 75225

Reference: XENCO Report No(s): **574342**
OWL091317D
Project Address: JAL,NM

Phillip Sanders:

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) 574342. 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. 574342 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,

Kelsey Brooks
Project Manager

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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 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB11 0-2 (1)	S	01-23-18 09:30	2 ft	574342-001
SB11 0-2 (2)	S	01-23-18 09:35	2 ft	574342-002
SB11 2-4	S	01-23-18 09:40	4 ft	574342-003
SB11 4-6	S	01-23-18 09:45	6 ft	574342-004
SB11 6-8	S	01-23-18 09:50	8 ft	574342-005
SB11 8-10	S	01-23-18 09:55	10 ft	574342-006
SB11 10-11	S	01-23-18 09:59	11 ft	574342-007
SB12 0-2	S	01-23-18 10:15	2 ft	574342-008
SB12 2-4	S	01-23-18 10:20	4 ft	574342-009
SB12 4-6	S	01-23-18 10:30	6 ft	574342-010
SB12 6-8	S	01-23-18 10:35	8 ft	574342-011
SB12 8-10	S	01-23-18 10:40	10 ft	574342-012
SB12 10-11	S	01-23-18 10:50	11 ft	574342-013
SB13 0-2	S	01-23-18 11:15	2 ft	574342-014
SB13 2-4	S	01-23-18 11:20	4 ft	574342-015
SB13 4-6	S	01-23-18 11:30	6 ft	574342-016
SB13 6-8	S	01-23-18 11:40	8 ft	574342-017
SB13 8-10	S	01-23-18 11:50	10 ft	574342-018
SB13 10-11	S	01-23-18 12:00	11 ft	574342-019
SB14 0-2	S	01-23-18 12:30	2 ft	574342-020
SB14 2-4	S	01-23-18 12:40	4 ft	574342-021
SB14 4-6	S	01-23-18 12:50	6 ft	574342-022
SB14 6-8	S	01-23-18 13:00	8 ft	574342-023
SB14 8-10 (1)	S	01-23-18 13:05	10 ft	574342-024
SB14 8-10 (2)	S	01-23-18 13:05	10 ft	574342-025

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB11 0-2 (1)**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-001	Date Collected:	01.23.18 09.30	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.15.18 23.27	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB11 0-2 (2)**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-002	Date Collected:	01.23.18 09.35	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.15.18 23.32	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB11 2-4**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-003	Date Collected:	01.23.18 09.40	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.15.18 23.37	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB11 4-6**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-004	Date Collected:	01.23.18 09.45	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.15.18 23.43	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB11 6-8**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-005	Date Collected:	01.23.18 09.50	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 00.00	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB11 8-10**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-006	Date Collected:	01.23.18 09.55	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 00.05	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB11 10-11**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-007	Date Collected:	01.23.18 09.59	Sample Depth:	11 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 00.10	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB12 0-2**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-008	Date Collected:	01.23.18 10.15	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 00.16	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB12 2-4**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-009	Date Collected:	01.23.18 10.20	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 00.21	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB12 4-6**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-010	Date Collected:	01.23.18 10.30	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 00.26	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB12 6-8**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-011	Date Collected:	01.23.18 10.35	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.43**	5.00	mg/kg	02.16.18 00.42		1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB12 8-10**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-012	Date Collected:	01.23.18 10.40	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.6**	5.00	mg/kg	02.16.18 00.47		1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB12 10-11**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-013	Date Collected:	01.23.18 10.50	Sample Depth:	11 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.2**	5.00	mg/kg	02.16.18 01.05		1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB13 0-2**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-014	Date Collected:	01.23.18 11.15	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 01.10	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB13 2-4**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-015	Date Collected:	01.23.18 11.20	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 01.15	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB13 4-6**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-016	Date Collected:	01.23.18 11.30	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 01.21	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB13 6-8**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-017	Date Collected:	01.23.18 11.40	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 01.26	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB13 8-10**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-018	Date Collected:	01.23.18 11.50	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 01.31	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB13 10-11**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-019	Date Collected:	01.23.18 12.00	Sample Depth:	11 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.15.18 18.00	Basis:	Wet Weight
Seq Number:	3041201				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.16.18 01.36	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB14 0-2**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-020	Date Collected:	01.23.18 12.30	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.16.18 11.00	Basis:	Wet Weight
Seq Number:	3041414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	02.16.18 13.51	U	1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB14 2-4**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-021	Date Collected:	01.23.18 12.40	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.16.18 11.00	Basis:	Wet Weight
Seq Number:	3041414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.3**	5.00	mg/kg	02.16.18 14.07		1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB14 4-6**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-022	Date Collected:	01.23.18 12.50	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.16.18 11.00	Basis:	Wet Weight
Seq Number:	3041414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.2**	4.97	mg/kg	02.16.18 14.12		1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB14 6-8**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-023	Date Collected:	01.23.18 13.00	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.16.18 11.00	Basis:	Wet Weight
Seq Number:	3041414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.0**	4.97	mg/kg	02.16.18 14.17		1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB14 8-10 (1)**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-024	Date Collected:	01.23.18 13.05	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.16.18 11.00	Basis:	Wet Weight
Seq Number:	3041414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**106**	4.92	mg/kg	02.16.18 14.23		1

Certificate of Analytical Results 574342

OWL SWD Operating LLC, Dallas, TX

OWL091317D

Sample Id:	**SB14 8-10 (2)**	Matrix:	Soil	Date Received:	01.24.18 08.20
Lab Sample Id:	574342-025	Date Collected:	01.23.18 13.05	Sample Depth:	10 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.16.18 11.00	Basis:	Wet Weight
Seq Number:	3041414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**119**	4.99	mg/kg	02.16.18 14.39		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 Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

QC Summary 574342

OWL SWD Operating LLC

OWL091317D

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3041201 Matrix: Solid Date Prep: 02.15.18
MB Sample Id: 7639216-1-BLK LCS Sample Id: 7639216-1-BKS LCSD Sample Id: 7639216-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	255	102	267	107	90-110	5	20	mg/kg	02.15.18 23:00	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3041414 Matrix: Solid Date Prep: 02.16.18
MB Sample Id: 7639320-1-BLK LCS Sample Id: 7639320-1-BKS LCSD Sample Id: 7639320-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	272	109	273	109	90-110	0	20	mg/kg	02.16.18 13:40	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3041201 Matrix: Soil Date Prep: 02.15.18
Parent Sample Id: 574342-010 MS Sample Id: 574342-010 S MSD Sample Id: 574342-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	265	106	275	110	90-110	4	20	mg/kg	02.16.18 00:32	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3041201 Matrix: Soil Date Prep: 02.15.18
Parent Sample Id: 576499-001 MS Sample Id: 576499-001 S MSD Sample Id: 576499-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	167	250	429	105	436	108	90-110	2	20	mg/kg	02.15.18 23:16	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3041414 Matrix: Soil Date Prep: 02.16.18
Parent Sample Id: 574342-020 MS Sample Id: 574342-020 S MSD Sample Id: 574342-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	270	108	270	108	90-110	0	20	mg/kg	02.16.18 13:56	

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

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

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 574342

OWL SWD Operating LLC

OWL091317D

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3041414 Matrix: Soil Date Prep: 02.16.18

Parent Sample Id: 575953-009 MS Sample Id: 575953-009 S MSD Sample Id: 575953-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	363	249	615	101	613	100	90-110	0	20	mg/kg	02.16.18 15:10	

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

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

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

CHAIN OF CUSTODY

Page 1 Of 3

Revision 2016.1

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Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote # | Xenco Job # 574342

Client / Reporting Information

Company Name / Branch: OWL SWD Operating LLC
Company Address: 8214 Westchester Dr #850 Dallas, TX
Email: Phillip Sanders psanders@oilfieldwaterlogistics.com
Phone No: 210-906-3553
Project Contact: Phillip Sanders
Samplers's Name: James Fox / KJE

Project Information

Project Name/Number: IRP-4820 / OWL091317D
Project Location: Jal, NM
Invoice To: OWL - Phillip Sanders
PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chlorides	Field Comments
1	SB11 0-2 (1)	2'	1.23	0930	S	1								X	X	X	X	
2	SB11 0-2 (2)	2'		0935														
3	SB11 2-4	4'		0940														
4	SB11 4-6	6'		0945														
5	SB11 6-8	8'		0950														
6	SB11 8-10	10'		0955														
7	SB11 10-11	11'		0959														
8	SB12 0-2	2'		1015														
9	SB12 2-4	4'		1020														
10	SB12 4-6	6'	↓	1030	↓	↓								↓	↓	↓	↓	

Temp: 3.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.1

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

NOTES:

*Email reports to dena@kjenvironmental.com and james@kjenvironmental.com
*Please hold until approved to run [redacted] analysis

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1.23.18 2045	1	2		2
	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3			3	4		4
	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
5			5			

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 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 invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

Final 1.000

CHAIN OF CUSTODY

Page 2 Of 3

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Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote # | Xenco Job # 574342

Client / Reporting Information

Company Name / Branch:

Company Address:

Email: See page #1 Phone No:

Project Contact:

Samplers's Name:

Project Information

Project Name/Number: IRP-9820 / OWL 091317D

Project Location: Jal, NM

Invoice To: OWL - Phillip Sanders

PO Number:

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH	BTEX	Chlorides	Field Comments
1	SB12 6-8	8'	1.23	1035	S	1								X	X	X	X	
2	SB12 8-10	10'		1040														
3	SB12 10-11	11'		1050														
4	SB13 0-2	2'		1115														
5	SB13 2-4	4'		1120														
6	SB13 4-6	6'		1130														
7	SB13 6-8	8'		1140														
8	SB13 8-10	10'		1150														
9	SB13 10-11	11'		1200														
10	SB14 0-2	2'		1230														

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes: * See page #1

Temp: 3.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.1

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1.23.18 2045	1	2		2
3	Relinquished by:	Date Time:	Received By: 1.24.18 8:20	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. | Thermo. Corr. Factor

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Page 3 Of 3

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www.xenco.com

Xenco Quote # | Xenco Job # 574342

Client / Reporting Information

Company Name / Branch:

Company Address:

Email: See page #1 Phone No:

Project Contact:

Samplers's Name:

Project Information

Project Name/Number: IRP-4820 / OWL091317D

Project Location: Jal, NM

Invoice To: OWL - Phillip Sanders

PO Number:

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH	BTEX	Chlorides	Field Comments
1	SB14 2-4	4'	1.23	1240	S	1								X	X	X	X	
2	SB14 4-6	6'	"	1250	"	"								"	"	"	"	
3	SB14 6-8	8'	"	1300	"	"								"	"	"	"	
4	SB14 8-10 (1)	10'	"	1305	"	"								"	"	"	"	
5	SB14 8-10 (2)	10'	"	1305	"	"								"	"	"	"	
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [X] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

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Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] Level II Report with TRRP checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

FED-E

Notes:

* See page #1

Temp: 3.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.1

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1.23.18 2045	1	2		2
3			3 1.24.18 8:20	4		4
5			5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 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 invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: OWL SWD Operating LLC

Date/ Time Received: 01/24/2018 08:20:00 AM

Work Order #: 574342

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.1
#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)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Shawnee Smith Date: 01/24/2018
Shawnee Smith

Checklist reviewed by: Kelsey Brooks Date: 02/15/2018
Kelsey Brooks

APPENDIX F

Environmental Professional's Credentials

Kevin J. Ware

109 South Oakland Street
Denton, Texas 76201
Phone: 940-387-0805
Fax: 940-387-0830
Cell: 469-487-6083
kevin@kjenvironmental.com

EDUCATION

M.S., Environmental Engineering
Oklahoma State University, Stillwater, Oklahoma

B.S., Environmental Science
University of Oklahoma, Norman, Oklahoma

WORK EXPERIENCE

KJ Environmental Mgt., Inc.
Denton, Texas

President **– (December 2005 to Present)**

- Environmental compliance audits of large scale industrial and manufacturing plants
  - Air, water, waste, EPA reporting, etc….
- Hazardous Waste Management
  - Hazardous waste audits & management plans for thirty different industries
  - Designing process modifications for industrial clients to reduce waste (P2)
- Hazardous waste remediation
  - Soil & groundwater cleanup
    (Chlorinated solvents -lumber treating operation, Broken Bow, OK)
  - Soil & surface water cleanup
    (Lead contamination - natural gas pipeline, Madill, OK)
- Air permitting
  - Major source air permit applications for several large industries
- Phase I and Phase II Environmental Site Assessments
- Wetland delineation studies
- Storm water pollution prevention management (construction and industrial facilities)
- Expert witness

GaiaTech, Inc.
Irving, Texas

Senior Environmental Consultant **– (August 2005 to December 2005)**

- Performed Environmental Compliance, safety and engineering audits for various large-scale industrial/commercial clients
  - air, water, hazardous waste, safety, etc.
- Designed waste minimization system to lower operating costs for businesses
  - i.e., wastewater recycling project

Isbell Engineering Group, Inc.
Sanger, Texas

Senior Environmental Engineer – (July 2003 to August 2005)

- Completed environmental compliance and safety audits for industrial clients
- Performed Phase I Environmental Site Assessments – Due Diligence
- Reviewed engineering designs for a fire suppression system at a FEMA facility
- Directed environmental investigations for waste dump sites
- Designed utility (water/sanitary sewer) lines for subdivisions and other developments
- Assisted in the development of civil engineering construction plans for small medical offices/facilities
- Assisted in the review of City Engineering plans for small municipalities
- Assisted in the design and construction management of a 200,000 gal/day municipal-related wastewater treatment plant

Science Applications International (SAIC)
Midwest City, Oklahoma

Environmental Engineer – (May 2003 to July 2003)

- **Created Site Health & Safety Plan for Air Force Remediation Project (Tinker AFB)**
- **Field Safety Manager for groundwater monitoring project (Tinker AFB)**

Marshall Environmental Management, Inc.
Oklahoma City, Oklahoma

Environmental Specialist – (November 1999 to May 2003)

- **Facility-wide noise survey (FAA Facility- Will Rogers Airport, Oklahoma)**
- **Industrial Hygiene Studies – Tinker, AFB**
- **Lead-based paint analysis & remediation design of base housing (Vance AFB, OK)**
- Project Supervisor for cleanup and disposal of hazardous material spills
    - Emergency Response situations

Department of Environmental Quality (Oklahoma)
Oklahoma City, Oklahoma

Environmental Specialist – (July 1999 to November 1999)

- Trained and informed businesses of pollution prevention techniques
- Explained the applicability of environmental regulations to specific industrial sectors and regulated entities

CERTIFICATIONS AND LICENSES

- Engineer-In-Training (EIT)
- Qualified Environmental Professional – (Institute of Professional Practice)
- Registered Professional Environmental Specialist (Oklahoma)

OTHER

- **Routine Guest Lecturer for Southwest Oklahoma State Aviation Safety Classes at Tinker AFB, Midwest City, OK**

James Lawrence Fox

PROJECT MANAGER

WORK HISTORY

Project Manager
KJ Environmental Management, Inc.
2014 – Present

I am currently working as a Project Manager at KJ Environmental in Cross Roads, Texas. I have over three years of experience in the environmental field. I provide regulatory compliance services for various industries including oil and gas storage and trucking facilities, sand and gravel mining facilities, and manufacturing facilities. My areas of expertise include project management, wetland determination and delineation, construction and industrial storm water pollution prevention plans (SWPPP), management of PST tank pulls, oil pollution prevention compliance (SPCC), asbestos sampling and assessments, Phase I Environmental Site Assessments, Limited Phase II Environmental Site Assessments, and Naturally Occurring Radioactive Material (NORM) surveys. I have also served as the Project Manager 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. I currently work as a Project Manager to complete projects for a variety of industries, while ensuring the delivery of the highest quality work product, customer service, and professionalism.

Environmental Scientist
Trinity River Authority of Texas (TRA)
2013 - 2014

At TRA, I conducted surface water sampling throughout the Trinity River Basin. Under the Planning and Environmental Services Special Studies and Assessments Manager, I handled a variety of tasks related to field data collection, field gear and sampling equipment preparation/maintenance, and data quality assurance/analysis. I worked within an interdisciplinary scientific team in both field and office settings. The job was physically demanding in harsh, outdoor environments. Main field studies included biological surveys, water quality sampling, geomorphological and hydrological surveys.

Field Technician
Texas Forest Service (TFS)
2009-2013

At TFS, I conducted various types of tree surveys for exotic invasive trees and insects throughout east Texas. I became very experienced in identifying woody plants and herbaceous species of Texas. I was certified for Wildland firefighting and assisted the U.S. Forest Service in prescribed burnings. I specifically aided in research and control of the southern pine beetle (*Dendroctonus frontalis*), Ips bark beetle (I*ps grandicollis, calligraphus and avulsus*), Nantucket pine tip moth (*Rhyacionia frustrana*) for the Texas Forest Service.

Military Service

United States Marine Corps
2004-2010

I served in Fallujah, Iraq with the 14th Marines in 2006 - 2007. During that time, I was awarded medals of combat action, Marine Corps Reserve select, Global war on terrorism, Iraq campaign medal, Sea service deployment, national defense service, Navy unit commendation, and armed forces reserve. My occupational specialty was an Automotive Maintenance Technician for the High Mobility Multipurpose Wheeled Vehicle (HMMWV), and the Medium Tactical Vehicle Replacement (MTVR). During my time in Fallujah, I assisted in planning and security of hundreds of convoys for multiple platoons of infantry Marines. I also routinely drove the lead patrol vehicle with an Improvised Explosive Devise (IED) / Mine sweeper attachment on a 7-ton vehicle.

EDUCATION

University of Stephen F. Austin
Bachelor of Science in Forestry with a focus in Wildlife Management
2009 – 2013

Activites and Societies:
Ducks Unlimited
Wildlife Society

ADDITIONAL INFORMATION

Professional Education & Certifications:

HAZWOPER 40 HR Certification
Certified Asbestos Inspector (Certificate No. 15039)
Certified NORM Surveyor
USACE Wetland Delineation 40 HR Training Course
Red Card certified for Wildland firefighting
SPCC/FRP Compliance Workshop, EPA Region 6

Affiliations:

Planning and Zoning Committee member for the City of Sanger, Texas
Parks and Recreation Committee member for the City of Sanger, Texas
Society of Texas Environmental Professionals

CONTACT INFORMATION

Email: jfox3549@yahoo.com
Phone: (940) 368 - 3535

Stanley "Gregg" Bessire, P.E., P.G.

940-387-0805 gregg@kjenvironmental.com

PROFESSIONAL EXPERIENCE:

KJE Environmental & Civil Engineering 2016 – Present

KJ Environmental Management, Inc. (KJE) is a dedicated, full-service environmental and civil engineering consulting firm located on the north side of the Dallas-Fort Worth metroplex. KJE is comprised of a team of professionals who strive to provide creative and cost effective solutions for today's multi-faceted environmental and civil engineering issues.

Senior Project Manager – Primary projects include Phase II Environmental Site Assessments, SPCC Plans, Stormwater Pollution Prevention Plans, and Oil and Gas Permitting.

Sage Environmental Consulting, L.P., Richardson, TX 2011 - 2016

Sage Environmental Consulting provides environmental project management and consulting services nationwide. Role was to manage soil and groundwater investigation projects and remediation, Due Diligence projects, Spill Prevention, Control, and Countermeasure (SPCC) Plans, and Storm Water Pollution Prevention Plans (SWPPP).

Senior Project Manager

- Developed and managed a fugitive gas emissions program for all New Source Performance Standard (NSPS) OOOO and Subpart W regulated equipment. The client was a Major Global Oil Company and project sites consisted of their Onshore USA Assets.
- Implemented best practices using Optical Gas Imaging (OGI) and FLIR GF320 Infrared Cameras to inspect all onshore equipment to identify any fugitive gas emission leak sources.
- Developed a Master Fugitive Emissions Program Plan and provided to all the assets, which included procedures, training, and methods for maintaining the program. Managed implementation by client supervisors at various locations throughout Texas and Louisiana.

Due Diligence Manager

- Managed teams of personnel who conducted due diligence site inspections for over 1,200 oil and gas wells and 67 tank batteries in less than two weeks across four separate regions of Texas.
- Reviewed Texas Commission on Environmental Quality (TCEQ) and Railroad Commission of Texas (RRCT) records, and aerial and site photographs for details and/or evidence of site contamination.
- Calculated estimated remediation costs for 49 separate tank batteries and well locations.

Senior Project Manager

- Proposed, Conducted, and Managed surface and subsurface spill investigations and remediation, and completed over 1,000 SWPPP and SPCC Plans.

Senior Project Manager

- Scheduled, Managed, and Performed Optical Gas Imaging (OGI) inspections utilizing FLIR (Forward Looking Infrared Radiometer) GF320 infrared cameras on offshore oil platforms in The Gulf of Mexico near Texas and Louisiana coasts.

Terracon Consultants, Inc., Enercon Services, Inc., Cirrus Associates, LLC., Fugro Consultants, Inc., Geoscience Consultants International, and Mas-Tek Engineering, Inc., Dallas/Fort Worth, TX 2009 - 2011

Civil Engineer / Professional Geoscientist / Project Manager: (Independent Consultant)
Primary projects included The North Tarrant Expressway in Fort Worth; the LBJ Freeway Managed Lanes in Dallas; and The Trinity River Levee and Floodplain investigation for The US Army Corp of Engineers.

- Conducted logging of drill holes and core holes to determine site specific lithology.
- Installed piezometers, developed monitor wells, and performed slug tests to determine the aquifer transmissivity and storativity for multiple monitoring wells.
- Conducted field soil tests, performed packer tests, installed piezometers, and recorded data from downhole pressure transducers.
- Assisted with CPT (Cone Penetrometer Testing) operator performing seismic survey tests, pore pressure dissipation tests, and dilatometer tests.
- Performed various other engineering projects on a contract basis. SPCC Plans, SWPPP, and Phase I or Phase II Environmental Site Assessments (ESAs) were additional responsibilities.

Talon/LPE, Inc., Carrollton, TX 2008 – 2009

Senior Engineer / Project Manager
- Managed, supervised, and conducted all project activities, including well/boring logging, development and sampling of groundwater monitoring wells; soil sample collection; waste classification and disposal; hydrogeologic characterizations; and preparing groundwater monitoring and corrective action plans.
- Designing, installed, and monitored the effectiveness of remediation systems. Performed these projects, as well as Phase I and II ESAs, for major oil, communication, utility, real estate, municipal, retail, and financial clients.
- Performed site visits and prepared SWPPP/SPCC Plans to maintain clients' regulatory compliance.

Terra-Solve, Inc., Carrollton, TX 1996 - 2008

Project Manager / Civil Engineer
- Managed, supervised, and conducted over 550 projects in 16 states. Coordinated field investigation activities, including scheduling and procurement of subcontract labor and necessary materials.
- Conducted well and boring logging at numerous sites in Texas, New Mexico, Oklahoma, and Arkansas. For these projects the lithologic units were described using the Unified Soil Classification System (USCS), conducted field screening for various geotechnical and analytical parameters, and prepared soil samples for shipping to testing laboratories in various states.
- Conducted Dual-Phase Extraction and aquifer tests, analyzed the recorded data and completed the required analytical reports. Performed these projects, as well as Phase I and II Environmental Site Assessments (ESAs), for major oil, communication, utility, real estate, municipal, retail, and financial clients.
- Designed remediation systems, supervised system installations, and monitored the effectiveness of various types of remediation systems.
- Performed site visits and prepared SWPPP/SPCC Plans to maintain clients' regulatory compliance.
- Provided construction management and engineering/construction inspection services over a five year period for a local municipality and Habitat For Humanity which included asphalt and concrete roadway construction, railroad crossings, utility installations, bridge construction, and sanitary sewer lift station construction.

EDUCATION, PROFESSIONAL REGISTRATIONS & TRAINING:

Education: B.S. *Petroleum Engineering*, **Texas Tech University**, Lubbock, TX

Professional Registrations:

- Licensed Professional Engineer (P.E.), (License No. 88441), Texas
- Licensed Professional Engineering Firm, (License No. 17779), Texas
- Licensed Professional Engineer (P.E.), (License No. 21593), New Mexico
- Licensed Professional Geoscientist (P.G.), (License No. 6264), Texas
- Licensed Professional Geoscientist (P.G.), (License No. 1051), Louisiana
- UST Remediation Consultant (License No. 60), Oklahoma
- Corrective Action Project Manager (CAPM No. 799), TCEQ
- Transportation Worker Identification Credential (TWIC), Transportation Safety Administration (TSA)

Certifications and Continuing Education:

- Occupational Safety and Health Administration (OSHA) Training for Hazardous Waste Operations, Supervisor Level, (40 Hour Course and Annual Refreshers)
- Basic Plus Safety and Annual Refreshers
- Wastewater and Stormwater Permitting and Compliance Seminars, TCEQ
- Produced Water Production Conference, Society of Petroleum Engineers
- Air Permitting Basics and Advanced Air Permitting, Sage Environmental Consulting
- Helicopter Underwater Egress Training (HUET), Falck Safety Training
- Oil and Gas Essentials, Sage Environmental Consulting
- Environmental Chemistry, Oklahoma State University
- Management of Solid and Hazardous Waste (RCRA), Oklahoma State University
- Pollution Prevention (P2) Plan and Waste Management Workshop, TCEQ
- Project Manager Professional Training (PMP), D and L Training

Dena Marie Vandenberg, REM, LEED AP
ENVIRONMENTAL PROFESSIONAL

WORK HISTORY

Chief Operating Officer / Director of Environmental Services
KJ Environmental Management, Inc.
June 2011 – Present (5 years, 2 months)

I am currently working as the Chief Operating Officer / Director of Environmental Services at KJ Environmental in Cross Roads, Texas. I have over eleven 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 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
Terracon
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
Cirrus Associates
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 worked conducted public drinking water sampling under a mulitmillion dollar TCEQ contract. I collected over 3,000 drinking water samples with a 99.8% laboratory acceptance rate. 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)
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

Email: denavandenberg@yahoo.com
Phone: (214) 364-7627

APPENDIX G

NMOCD Approved Pertinent Information and Workplans

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

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

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company OWL SWD OPERATING LLC	Contact Mr. Phillip Sanders
Address 8214 Westchester Dr. #850 Dallas, TX 75225	Telephone No. 210-906-3551
Facility Name N/A	Facility Type N/A

Surface Owner State	Mineral Owner State	API No. N/A

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	32	24S	35E					Lea

Latitude 32.1759 **Longitude** -103.3810 NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 25bbls / Volume Recovered 10bbls
Source of Release Above-ground in-field line (4in poly)	Date and Hour of Occurrence 9/13/17 @1600 / Date and Hour of Discovery 9/13/17 @1815
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD Hobbs District Office 575-393-6161
By Whom? KJ Environmental Management, Inc	Date and Hour 9-14-17 at 1330
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 10:15 am, Sep 22, 2017

Describe Cause of Problem and Remedial Action Taken.*
The pipeline was repaired, Mr. Phillip Sanders had a contractor construct an earthen berm around the spill area, and lay 20mm poly liner on the top of the affected area until an investigation/delineation plan is approved by the state.

Describe Area Affected and Cleanup Action Taken.*
Mr. Phillip Sanders had a vacuum truck brought on-site and recovered 10bbls.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: PHILLIP SANDERS	Approved by Environmental Specialist:
Title: SAFETY DIRECTOR	Approval Date: 9/22/2017 / Expiration Date:
E-mail Address: psanders@oilfieldwaterlogistics.com	Conditions of Approval: see attached directive / Attached ☑
Date: 9-21-17 Phone: 432-269-3735	

* Attach Additional Sheets If Necessary

1RP-4820 fOY1726537222 nOY1726537402 pOY1726537681

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _9/21/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-4820__ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _10/22/2017_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

● Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

● Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

● Nominal detection limits for field and laboratory analyses must be provided.

● Composite sampling is not generally allowed.

● Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

●Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

● If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

● Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Photo Exhibit

Photo 001.

Photo No. 002

Photo No. 003.

Photo No. 004.

Photo No. 005.

Photo No. 006.

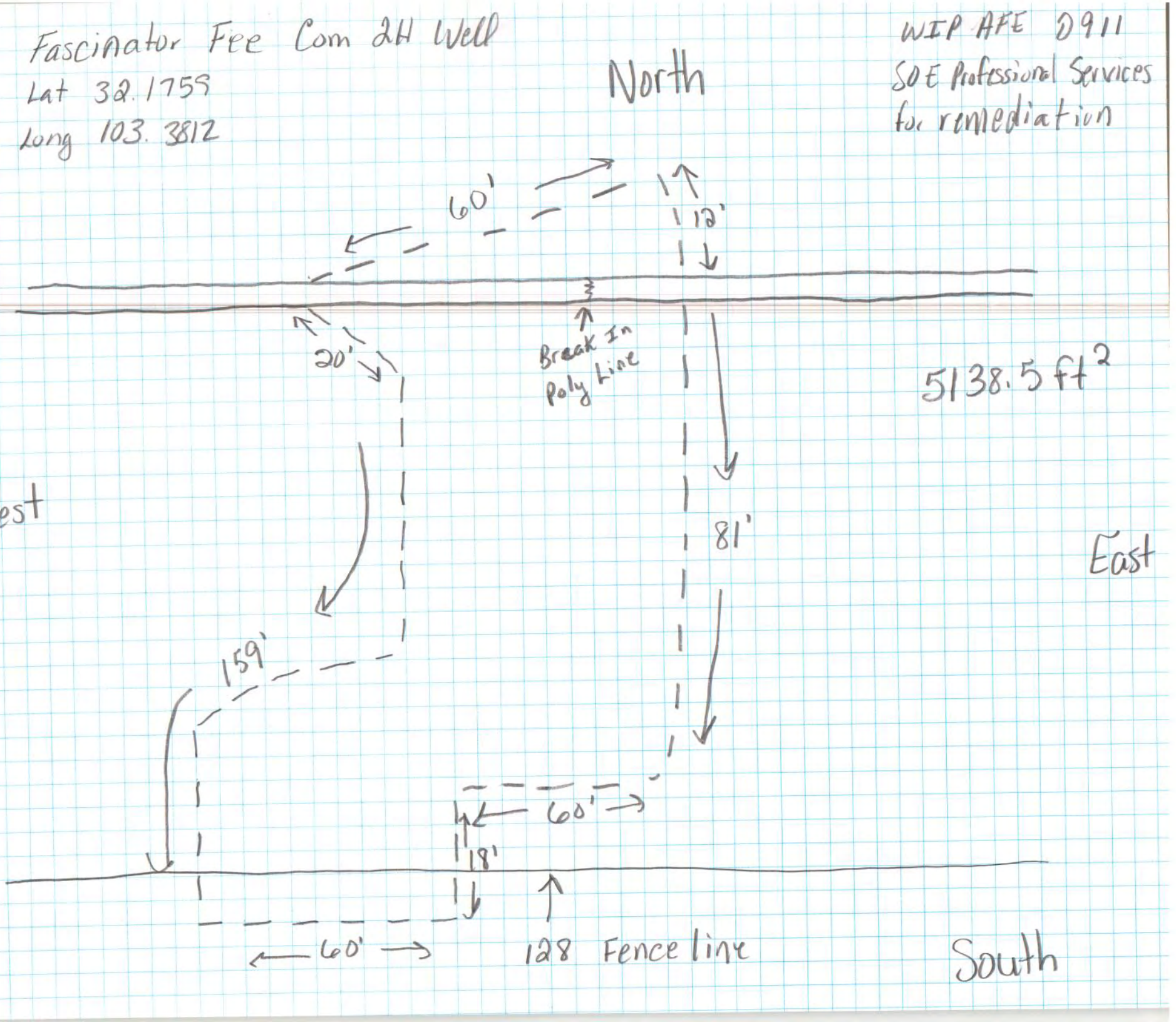
Fascinator Fee Com 2H Well

Lat 32.1759

Long 103.3812

WIP AFE 0911

SOE Professional Services for remediation



Aubrey Dunn
COMMISSIONER

State of New Mexico
Commissioner of Public Lands
310 OLD SANTA FE TRAIL
P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

COMMISSIONER'S OFFICE
Phone (505) 827-5760
Fax (505) 827-5766
www.nmstatelands.org

December 8, 2017

OWL SWD Operating, LLC
8214 Westchester Dr. #850
Dallas, Texas 75225

Attn: Phillip Sanders

Re: Right-of-Entry Permit No.: RE-3491

Dear Mr. Sanders:

Enclosed is the completed captioned Right-of-Entry permit. If any corrections are necessary, please let us know and we will retype or amend this permit as necessary.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact Anthony Vigil at 505-827-5710.

Sincerely,

Aubrey Dunn
Commissioner of Public Lands

AD/av

Enclosures

NEW MEXICO STATE LAND OFFICE
Commissioner of Public Lands
Aubrey Dunn
New Mexico State Land Office Building
P.O. Box 1148, Santa Fe, NM 87504-1148

RIGHT OF ENTRY PERMIT
CONTRACT NO. RE - 3491

1. RIGHT OF ENTRY PERMIT

This permit is issued under the authority of NMSA 1978, Section 19-1-2. Therefore, and in consideration of and subject to the terms, covenants, conditions, agreements, obligations and reservations contained in the permit and all other existing rights, the Commissioner of Public Lands, New Mexico State Land Office, State Of New Mexico, hereinafter called "COMMISSIONER," grants to **OWL SWD OPERATING, LLC.** State of Incorporation (if applicable) , whose address is **8214 WESTCHESTER DR, STE 850, DALLAS, TX, 75225** called "PERMITTEE," authorized use of a specific tract(s) of State Trust Land only for the term, and only for the permitted use, described in this permit.

2. TERM AND LAND DESCRIPTION

Right of entry is granted for a term of **180 days**, commencing on the execution date of this document by the Commissioner of Public Lands, to the following State Trust Lands.

Section	Township	Range	Subdivision	County
32	24S	35E	SE4NE4	Lea

3. APPLICATION and PROCESSING FEE

$ 50.00 Application Fee
$ 500.00 Permit Fee
$ 550.00 Total Fee

4. PERMITTED USE, PERSONNEL, EQUIPMENT AND MATERIALS

Permitted use is for the purpose of: **to perform proper delineation and remediation of the 25 BBL release (Please note that this permit does not allow for any off road traffic**

Personnel present on State Trust Land: **Owl employees, KJ Environmental, Inc. employees**

Equipment & Materials present on State Trust Land: **various heavy equipment, vehicles and soil stockpile**

Prior to execution of project company must contact the Surface Lessees.

The granting of this permit does not allow access across private lands.

5. IMPROVEMENTS

No improvements shall be placed on the premises without the prior written consent of the Commissioner.

6. RESERVATIONS

Commissioner reserves the right to execute leases, rights of way, easements, permits, exchange agreements, sale agreements, permits and other lawful rights on or across the land covered by this permit, including but not limited to any such rights for mining purposes and for the extraction of oil, gas, salt, geothermal resources, and other mineral deposits there from and the right to go upon, explore for, mine, remove and sell same.

7. COMPLIANCE WITH LAWS

Permittee shall at its own expense comply fully with and be subject to all applicable regulations, rules, ordinances, and requirements of law or of the Commissioner, including but not limited to the regulations of the State Land Office; Chapter 19 NMSA governing State Trust Lands; federal and state environmental laws and regulations; and the New Mexico Cultural Properties Act, NMSA 1978 Sections 18-6-1 through 18-6-23. It is illegal for any person or his agent to appropriate, excavate, injure, or destroy any historic, or prehistoric ruin or monument, or any object of historical, archaeological, architectural, or scientific value situated on lands owned or controlled by the State Land Office without a valid permit issued by the Cultural Properties Review Committee and approved by the Commissioner of Public Lands.

8. HOLD HARMLESS AND IMDEMNIFICATION

Permittee shall save, hold harmless, indemnify and defend Commissioner, the State Land Office, the State of New Mexico, and any of their officers, employees or agents, in their official and individual capacities, of and from any and all liability, claims, losses, damages, costs, and fees arising out of or alleged to arise out of, or directly or indirectly connected with, the operations of Permittee under this permit on or off State Trust Lands or arising out of the presence on State Trust Lands of any equipment, material, agent, invitee, contractor or subcontractor of Permittee. This Hold Harmless and Indemnification clause covers any claim, including any brought in any court or before any administrative agency, of any loss or alleged loss, and any damages or alleged damages asserted with respect to any violation or alleged violation of any state, federal or local law or regulation, including but not limited to any environmental law or regulation, any cultural properties law (including the New Mexico Cultural Properties Act, cited above) or regulation, and any alleged damage to the property, rights or interests of any State Land Office lessee, right-of-way holder, or other permittee.

9. AMENDMENT

This permit shall not be altered, changed, or amended except by an instrument in writing executed by Commissioner and Permittee.

10. WITHDRAWAL

Commissioner reserves the right to withdraw any or all of the land authorized for use under this permit. If applicable, Permittee shall vacate the acreage specified within 30 days after receipt of written notification of withdrawal from the Commissioner.

11. CANCELLATION

The violation by Permittee of any of the terms, conditions, or covenants of this permit or the nonpayment by Permittee of the fees due under this permit shall at the option of the Commissioner be considered a default and shall cause the cancellation of this permit 30 days after Permittee has been sent written notice of such.

12. PRESERVE AND PROTECT

The Permittee agrees to preserve and protect the natural environmental conditions of the land encompassed in this permit, and to take those reclamation or corrective actions that are accepted soil and water conservation practices and that are deemed necessary by the Commissioner to protect the land from pollution, erosion, or other environmental degradation. The Permittee further agrees not to injure the property of, or interfere with the operations or rights of, any State Land Office lessee, right-of-way holder, easement holder or other permittee who has rights to use the State Trust Land subject to this permit.

13. PIPELINE IDENTIFICATION AND SPACING REQUIREMENTS

The Permittee shall label each aboveground pipeline crossing State Trust Lands with the Permittee's name, and contact information. Such information shall be placed at both the inlet and outlet of the pipeline, and every 2,500 feet between the two points. Pipelines must be spaced a minimum of 12" apart from existing surface pipelines to allow for livestock to cross. If the minimum line spacing cannot be met to allow livestock to cross, berms 3 feet in width must be placed in areas where established cattle trails exist, but no less than every tenth of a mile.

14. RECLAMATION, REMOVAL OF EQUIPMENT, MATERIALS, AND WASTE

The Permittee agrees to reclaim those areas that may be damaged by activities conducted thereon.

The Permittee agrees to remove from the State Trust Lands, no later than the end of the term of this permit, all equipment, and materials it has placed or brought upon the land and to clean up and remove from the land any trash, waste, effluent, or other products used or brought upon the land in connection with this permit.

15. SPECIAL INSTRUCTIONS AND/OR RESTRICTIONS

1. No off road traffic allowed.

2. No wood collection or tree cutting allowed.

3. Disturbing, dislodging, damaging, defacing, destroying or removing historical archaeological, paleontological or cultural sites or artifacts in a manner inconsistent with the provisions of the granted permit is prohibited.

4. Disturbing, dislodging, damaging, defacing, destroying any improvement, fixture, item, object or thing placed or located in, under or upon the land is prohibited.

5. This permit does not grant a right to enter State Trust Lands to which there is no public access.

6. Any uses or activities not within the scope of this permit are not allowed unless prior written approval from the Commissioner of Public Lands is granted.

7. Line pressure not to exceed 125 psi.

PERMITTEE: OWL SWD Operating, LLC

By: _____

ACKNOWLEDGMENT

STATE OF Texas)
) ss.
COUNTY OF Midland)

The foregoing instrument was acknowledged before me this 6 day of December, 2017, by _____, of Oilfield Water Logistics, a Limited Liability Company corporation, on behalf of said corporation.

My Commission Expires:
8/21/2019

_____
NOTARY PUBLIC

CHERYL PROCTOR
Notary Public, State of Texas
My Commission Expires
August 21, 2019

STATE OF NEW MEXICO

BY: _____
AUBREY DUNN
COMMISSIONER OF PUBLIC LANDS

SEAL

DATE: 12/13/17

RE - 3491

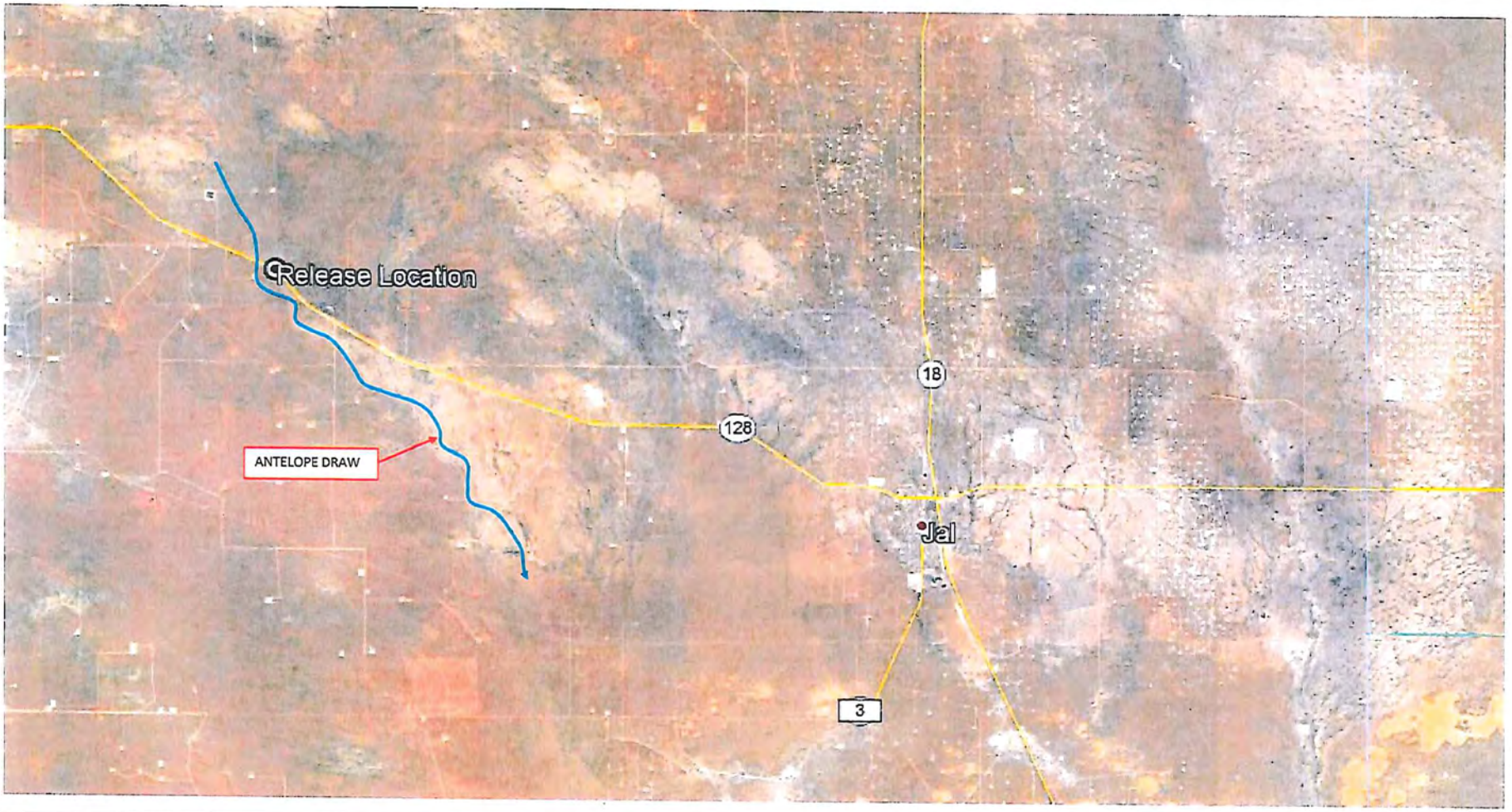
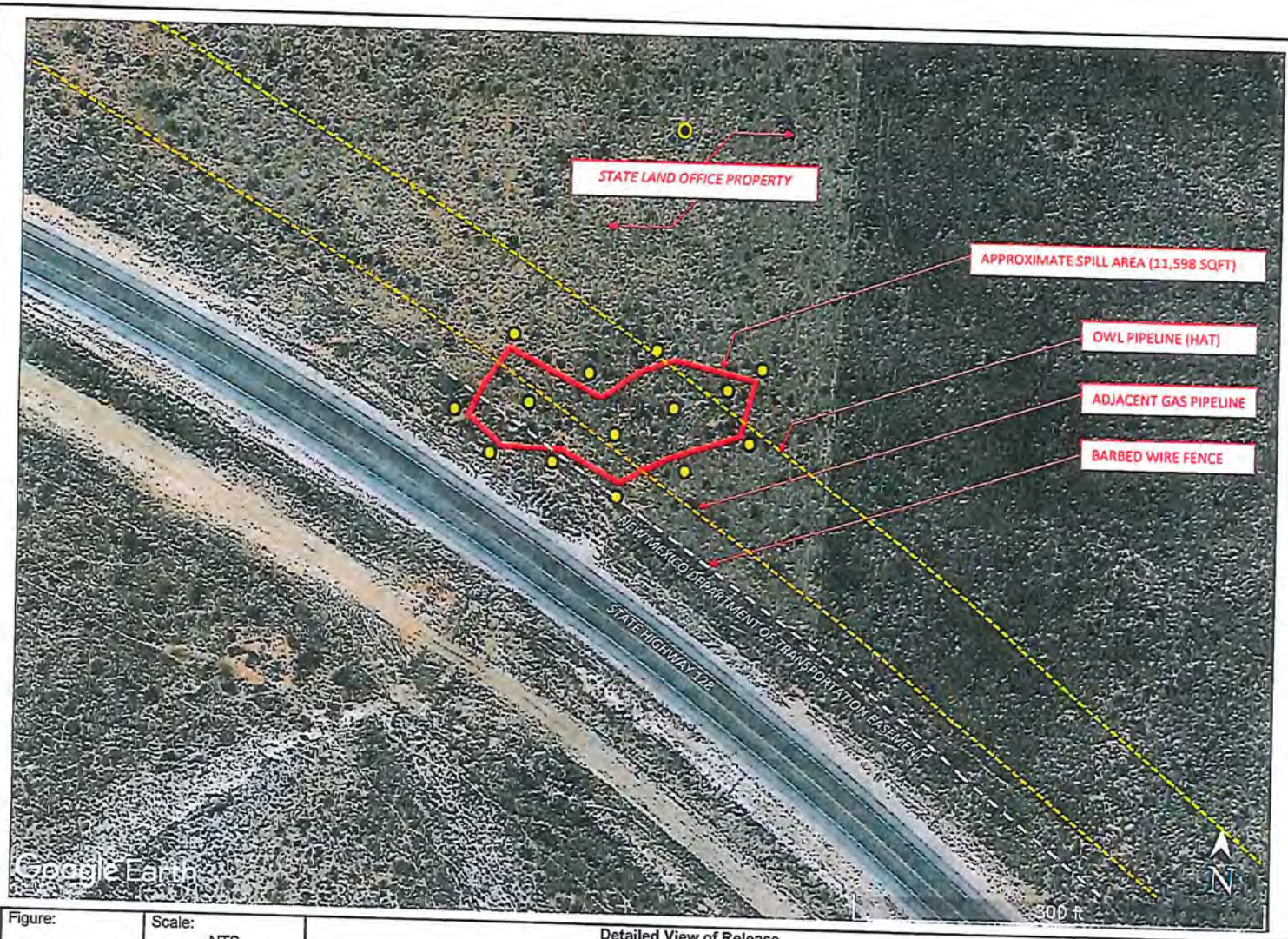


Figure:	Scale:			
A1	NTS	**General View of Release** OWL SWD Operating, LLC Jal, New Mexico Unit H Section 32 Township 24S Range 35E	KJE	N
	Date: October 2017			



LEGEND

- PROPOSED BORING LOCATION
- PROPOSED BACKGROUND SAMPLE
- GROUNDWATER MONITORING WELL

NOTE: LOCATION OF THE GROUNDWATER MONITORING WELL WILL BE DETERMINED AFTER INITIAL LAB ANALYSIS

FLOW DIRECTION

Figure:	Scale:	Detailed View of Release		
A2	NTS	OWL SWD Operating, LLC Jal, New Mexico Unit H Section 32 Township 24S Range 35E	KJE	N
	Date: October 2017			

Surface Lessee Contact Information

Please notify all lessee's provided below prior to the start of your project.

- GM-3222- Bert Madera
  P.O. Box 2795, Ruidoso, New Mexico 88355

CONFIDENTIAL

WORK PLAN
FOR THE CHARACTERIZATION OF IMPACTS

OCTOBER 19, 2017

OWL SWD OPERATING, LLC
UNIT LETTER H, SECTION 32, T24S, R35E
LEA COUNTY, NEW MEXICO
CASE NO. 1RP - 4820

PREPARED FOR:

MS. OLIVIA YU
ENVIRONMENTAL SPECIALIST
STATE OF NEW MEXICO ENERGY MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION
1625 NORTH FRENCH DRIVE
HOBBS, NEW MEXICO 88240

APPROVED
By Olivia Yu at 11:30 am, Nov 30, 2017

PREPARED BY:

KJE
ENVIRONMENTAL & CIVIL ENGINEERING
500 MOSELEY ROAD
CROSS ROADS, TEXAS 76227
(940) 387-0805 PHONE
(940) 387-0830 FAX

NMOCD approves of the proposed delineation plan for 1RP-4820 with these modifications:
1) Due to the presence of a surface waterbody approx. 750 ft SW, permissible TPH levels are 1000 mg/kg.
2) Vertically delineate to <= 600 mg/kg chlorides and maintained for 10 ft. further in depth.

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

October 19, 2017

New Mexico Energy Minerals and Natural Resources Department (NM EMNRD)
Oil Conservation Division (OCD) – District 1
Ms. Olivia Yu
Environmental Specialist
1625 North French Drive
Hobbs, New Mexico 88240

Re: Work Plan for the Characterization of Impacts Due to a Pipeline Release
OWL SWD Operating, LLC Produced Water Pipeline Nearby Unit Letter H, Section 32, T26S, R36E, Lea County, New Mexico – Case No. 1RP-4820

Dear Ms. Yu:

KJE understands that the goals of the characterization effort are: 1) Determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) Determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact 4) The characterization of any other adverse impacts that may have occurred (ex. Impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.).

KJE is pleased to provide the attached Work Plan for the characterization of Impacts due to a pipeline release associated with OWL SWD Operating, LLC (OWL's) pipeline, located in Lea County, New Mexico.

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.

James L. Fox, CNRP
Environmental Project Manager

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

ENVIRONMENTAL & CIVIL ENGINEERING
500 Moseley Road
Cross Roads, Texas 76227
Phone 940-387-0805
Fax 940-387-0830

October 19, 2017

New Mexico, Energy Minerals and Natural Resources (EMNRD)
Oil Conservation Division (OCD) – District 1
Ms. Olivia Yu
Environmental Specialist
1625 North French Drive
Hobbs, New Mexico 88240

Re: Work Plan for the Characterization of Impacts Due to a Pipeline Release
OWL SWD Operating, LLC Produced Water Pipeline Nearby Unit Letter H, Section 32, T26S, R36E, Lea County, New Mexico – Case No. 1RP-4820

Dear Ms. Yu:

KJ Environmental Management, Inc. (KJE) proposes to perform the following environmental consulting services for OWL SWD Operating, LLC (OWL) for the delineation portion of the project.

Environmental Investigation

The proposed scope of work will consist of performing an Environmental Investigation to evaluate the presence/absence of environmental contaminants in the soil at the above-referenced produced water release location.

KJE understands that the goals of this Work Plan and characterization effort are: 1) Determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) Determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact 4) The characterization of any other adverse impacts that may have occurred (ex. Impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.).

The Investigation will consist of the following activities:

- KJE will contact New Mexico 811 to request that they communicate with underground utility companies in the site area for location of their pipelines beneath the site and the site area.

- Multiple soil borings will be installed to the maximum depth necessary to reach chloride and other constituent delineation levels as noted below (horizontal and vertical delineation), by Geoprobe. A site map (Figure A1) is attached showing the general location and extent of the release. The proposed soil boring locations are illustrated on attached Figure A2, but the quantity of borings and boring locations may be field adjusted due to onsite conditions. The drilling contractor will be using a five (5) foot split-spoon continuous sampling device to allow for sampling of soil at two and one half (2.5) foot intervals for laboratory analysis. The actual number of borings and number of samples collected for analysis will be determined in the field based on assessment of release areas and Geoprobe access points available.

- Horizontal delineation of soil impacts will be attempted in each of the four cardinal compass directions. Adsorbed soil contamination will be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes (BTEX) by either Method 8260 or 8021, total petroleum hydrocarbons (TPH) by Method 8015 extended range (GRO+DRO+MRO; C6 thru C36), and for chloride by Method 300. KJE understands that delineation to 10 ppm Benzene, 50 ppm BTEX, 5,000 ppm TPH, and 600 ppm chlorides horizontally is required. Soil sampling will be both within the impacted area and beyond as field determined.

- Vertical delineation of soil impacts will also be attempted. Adsorbed soil contamination will be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes (BTEX) by either Method 8260 or 8021, total petroleum hydrocarbons (TPH) by Method 8015 extended range (GRO+DRO+MRO; C6 thru C36), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified if required by OCD. Vertical characterization samples should be taken at depth intervals no greater than five (5) feet apart. Lithologic description of encountered soils will also be provided. KJE understands that delineation to 10 ppm Benzene, 50 ppm BTEX, 5,000 ppm TPH, and 250 ppm chlorides vertically is required. At least ten (10) vertical feet of soils with contaminant concentrations at or below these values will be demonstrated as existing above the water table.

- In addition to the horizontal and vertical delineation borings, KJE will install one (1) soil boring upgradient of the release area to a depth of ten (10) feet and collect background samples at two and one half (2.5) foot intervals for laboratory analysis.

- Discrete, grab soil samples will be collected from each of the two and one half (2.5) foot intervals for laboratory analysis. A clean, decontaminated sampling trowel will be used to sample from each depth interval selected. For each soil boring, soil samples will be field screened using a calibrated Photo-ionization Detector (PID) (Model RAE MINIRAE 3000 Lite 0-15K ppm) for the highest reading for each boring. The sample with the highest PID reading and the sample collected at the bottom of each boring will be submitted for laboratory analysis.

- A statistically significant set of split samples will be submitted for confirmatory laboratory analysis, including the laterally farthest from the release sites and vertically deepest set of soil samples collected. In addition, we will ensure that there are at least two samples submitted for laboratory analysis from each boring (highest contamination from PID and deepest depth investigated).

- Each soil sample will be handled with nitrile-gloved hands. The samples will be placed in clean, dedicated, laboratory-supplied, 4-ounce glass containers, and labeled with pertinent sampling information. The soil samples will be then placed in a cooling chest with adequate ice, providing a 4°C environment for sufficient preservation until delivery to Xenco Laboratory (a third-party, NELAP Certified, independent, and licensed environmental laboratory in Midland, Texas). The sample collection and handling activities will be conducted in accordance with USEPA Standard Operating Procedures and strict chain-of-custody protocols. The drilling equipment, sampling equipment, and tools will be decontaminated before and between each sampling location. All personnel will use dedicated nitrile gloves that will be changed frequently during the drilling activities.

- For this investigation, groundwater is not anticipated to be encountered during environmental drilling. According to records obtained from the New Mexico Office of the State Engineer's office Hydrology Bureau records, the minimum depth to water for water wells located in the same Township and Range as where the releases occurred is 200 feet. However, the records also indicate the location may be in an area with water present in the alluvial/quaternary age formation overlaying the Triassic formation, which appears to be associated with the Antelope Draw. The presence and/or depth of this potential water bearing formation are unknown. KJE will install one (1) groundwater monitoring well to a depth of 50' past the deepest contamination to verify the presence or absence and depth, if applicable, of a shallow groundwater-bearing formation. The location of the groundwater monitoring well will be determined based on the initial laboratory analysis and will be advanced in the area of highest contamination.

- If groundwater is encountered in any of the soil borings, the boring will be left open for twenty-four (24) hours to determine if substantial water accumulates for sample collection and lab analysis. After 24 hours, KJE will attempt to collect a groundwater sample using a new disposable bailer and submit the samples for laboratory analysis of BTEX, TPH, and Chloride, if possible.

- The New Mexico State Land Office (SLO) currently owns both the surface and subsurface estates that the release occurred on. The SLO and OCD both were notified of the spill via the C-141 Form submittal and will be copied together in further correspondence throughout the timeline of site investigation, delineation, and remediation efforts. Following the approval of this work plan, a Right of Entry (ROE) Request for Remediation application will be submitted with the associated fees to the SLO for approval.

During the initial site visit to determine approximate preliminary spill area, it was discovered that the pipeline release had also migrated across the southern property boundary onto the New Mexico Department of Transportation (NMDOT) easement of State Highway 128, approximately 0.31 miles west of mile marker 40. At this time, KJE has notified NMDOT of the spill and is working with District 2 of the NMDOT to comply with their access requirements.

Report of Findings

KJE will prepare and provide an electronic copy of the final report describing the findings, conclusions, and recommendations from the Environmental Investigation. KJE will present the laboratory analytical results in a tabular format and compare these levels to the OCD specified delineation levels. Accurately scaled and well-drafted site maps will be provided showing the location of all borings, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Digital photographic documentation of the release locations and field work will also be included.

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.

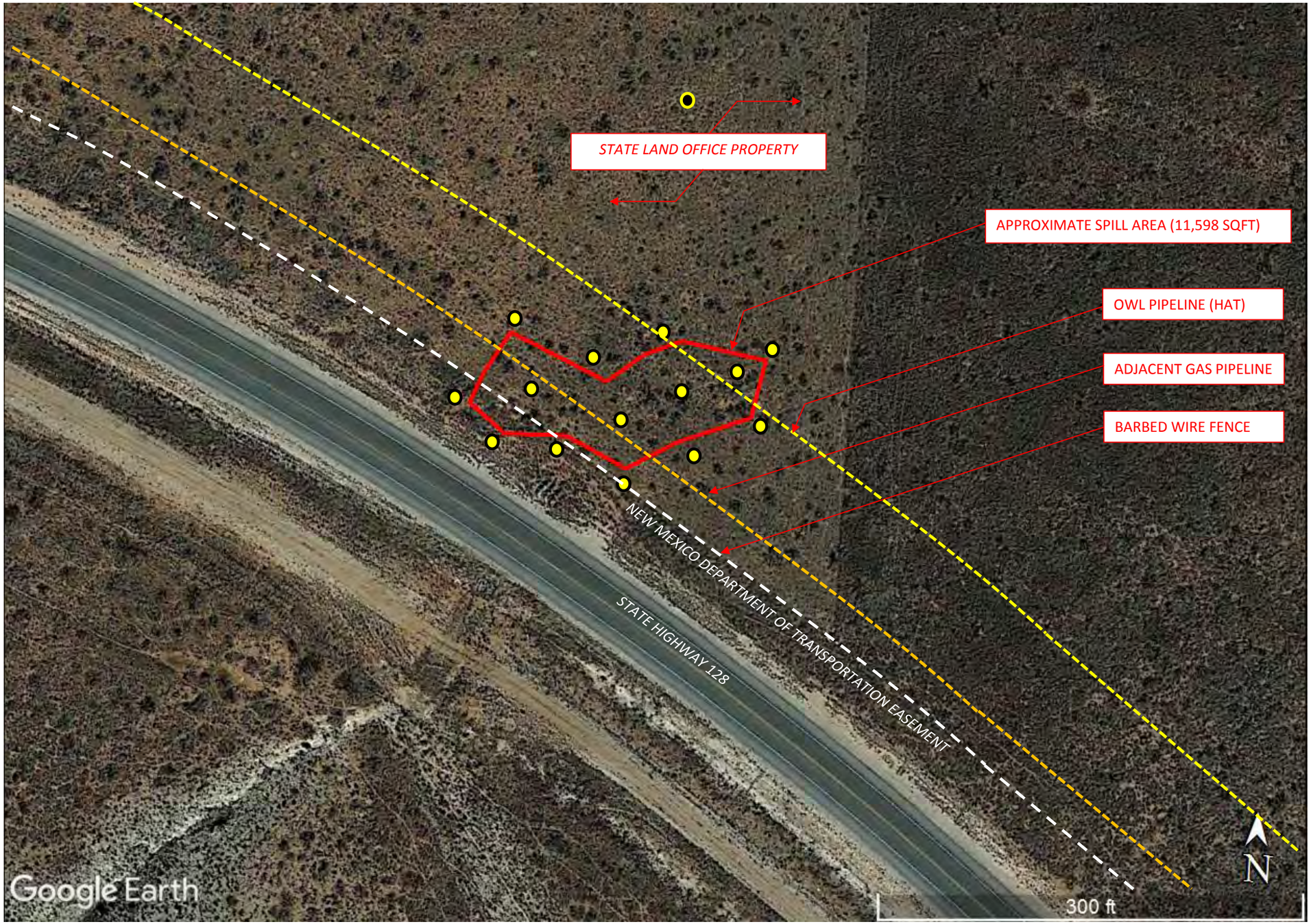
Sincerely,

James Fox, CNRP
Environmental Project Manager

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

Attachments: Figure A1 – General View of Release
Figure A2 – Detailed View of Release

Figure:	Scale:			
A1	NTS	**General View of Release** OWL SWD Operating, LLC Jal, New Mexico Unit H Section 32 Township 24S Range 35E	KJE ENVIRONMENTAL & CIVIL ENGINEERING	N
	Date: October 2017			



LEGEND

- PROPOSED BORING LOCATION
- PROPOSED BACKGROUND SAMPLE
- GROUNDWATER MONITORING WELL

NOTE: LOCATION OF THE GROUNDWATER MONITORING WELL WILL BE DETERMINED AFTER INITIAL LAB ANALYSIS

FLOW DIRECTION

Figure:	Scale:	**Detailed View of Release**		
A2	NTS	OWL SWD Operating, LLC Jal, New Mexico Unit H Section 32 Township 24S Range 35E	KJE ENVIRONMENTAL & CIVIL ENGINEERING	N
	Date: October 2017			