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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NRM1935041942
District RP	2RP-5719
Facility ID	
Application ID	pRM1935042026

Release Notification

03JC9-191025-C-1410

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.135897 Longitude -103.824050
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 387H Battery	Site Type Battery
Date Release Discovered 10/14/2019	API# *(if applicable)* 30-015-41185 (PLU 387H)

Unit Letter	Section	Township	Range	County
D	18	25S	31E	EDDY

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 24.33	Volume Recovered (bbls) 20.00
☐ Produced Water	Volume Released (bbls) 0	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Gasket failed on heater manway releasing oil into berm area. Additional third party resources have been retained to assist in the remediation.

Oil Conservation Division

Incident ID	NRM1935041942
District RP	2RP-5719
Facility ID	
Application ID	pRM1935042026

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

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/25/19

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Ramona Marcus Date: 12/16/2019

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5719
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5719
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 1-13-20

email: Kyle_Littrell @xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Date:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5719
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 1-13-20

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

Earth Systems
Response & Restoration

4115 South CR 1297
Odessa, TX 79765
432-813-1605

January 10, 2020

Mr. Mike Bratcher
District Supervisor
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

VIA EMAIL ONLY
Mike.Bratcher@state.nm.us

RE: Crude Oil Release Closure Request Report
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
NMOCD Remediation Permit Number 2RP-5719
Eddy County, New Mexico

Dear Mr. Bratcher:

Project Information

Earth Systems Response & Restoration (ESRR) was contracted by XTO Energy, Inc (XTO) to oversee, prepare, and provide written documentation to the New Mexico Oil Conservation Division (NMOCD) on the nature, extent, and remediation of soil impacted with crude oil from a release within and outside of the firewall berm at the subject Poker Lake Unit #387H Heater Treater Facility (site) release. The NMOCD has assigned remediation permit #2RP-5719 to this release. The site is on Bureau of Land Management (BLM) owned land located in Unit D, Section 18, Township 25 South, Range 31 East, in Eddy County, New Mexico. The GPS coordinates for the site are 32.136187° N and 103.824080° W. The site's location is depicted on Figure 1.

ESRR has prepared this Closure Request Report on behalf of XTO for use in documenting closure activities and for NMOCD consideration and approval. This report is an attachment to the Final C-141 Form submittal for 2RP-5719.

RELEASE BACKGROUND

This site is situated in the Pecos Valley, a part of the Great Plains physiographic province. The land surface is an irregular erosional surface that generally slopes to the west and south towards the Pecos River. This area is generally undeveloped and includes large areas of stabilized and drifting sand dunes with sparse vegetation along with active oil and gas assets owned by XTO and other companies.

On October 14, 2019, a release of 24.33 barrels of crude oil occurred due to a gasket failure on a heater treater manway which allowed oil to be released onto the ground surface and saturate soils inside the facility's containment area. In addition, oil was sprayed into the air which was then dispersed and covered the ground surface beyond the saturated soil area inside the containment, on the pad to the west and outside of the containment area, and on land located off the pad to the north and east of the facility. XTO notified the NMOCD District 2 office in Artesia, NM, on an initial Release Notification and Corrective Action Form C-141 (Form C-

141) on October 14, 2019. XTO reported that 20 barrels were recovered and 4.33 barrels were unrecovered. The initial Form C-141 and associated details are attached as Appendix A.

SITE CHARACTERIZATION

ESRR characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the site has been determined to be greater than or equal to 325 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well is New Mexico Office of the State Engineer (NMOSE) well C-33781-POD1, located approximately 6,850 feet southwest of the Site, with a reported depth to groundwater of 325 feet bgs and a total depth of 720 feet bgs. A United States Geological Survey (USGS) permitted well, #320856103502801, is located approximately 7,060 feet to the northwest, with a depth to groundwater reported at 390 feet bgs and total depth of 482 feet bgs. The nearest continuously flowing water or significant watercourse to the site is an unnamed dry wash located approximately 4,325 feet to the southwest. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake and greater than 300 feet from any occupied residence, school, hospital, institution, church or wetland. The site is greater than 1,000 feet to any freshwater well or spring, not within a 100-year floodplain or overlying a subsurface mine and is located within a low potential karst area.

CLOSURE CRITERIA

Based on the result of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- Gasoline range organics (GRO) and Diesel range organics (DRO): 1,000 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO): 2,500 mg/kg; and
- Chloride: 20,000 mg/kg.

SITE REMEDIATION AND CONFIRMATION SOIL SAMPLING

Initial site soil remediation activities were overseen by ESRR and performed by Superior Hydrovac Solutions, LLC (SHS) between November 18th and 21st of 2019. Field activities included the removal of impacted soil using hydrovac initially down to 0.5-foot bgs and subsequently down to 1.5-foot bgs in areas were visible staining and/or field screening indicated additional excavating was warranted. All impacted soil removed was directly placed within a constructed area lined with polyvinyl, bermed with caliche, and located on the well pad adjacent to the facility. ESRR was responsible for the overall coordination of field operations, project management tasks, field screening, soil sample collection, and assisted in managing safe work operations of all field personnel working on-site.

On November 18, 2019, site soil remediation was initiated, overseen by ESRR, and performed by Superior Hydrovac Solutions, LLC (SHS). Activities included the removal of soils using a hydrovac down to approximately 0.5-foot bgs in impacted areas located within the Heater Treater Facility's firewall and on the pad located outside and to the west of the firewall. All impacted soil removed was directly placed within a constructed area lined with polyvinyl, bermed with caliche, and located on the facility pad near the release area.

On November 20, 2019, twelve 5-point composite confirmation soil samples (CS-F1, CS-F2, CS-F3, CS-F4, CS-F5, CS-F6, CS-F7, CS-F8, CS-F9, CS-F10, CS-F11, and CS-F12) were collected from 0.5 (bottom of excavation) to 1.0 foot bgs and five grab confirmation soil samples (CS-W1, CS-W2, CS-W6, CS-W7, and CS-W8) were collected from the perimeter of excavated areas at 0.5 – 1.0 foot bgs. Six vertical delineation soil sample were collected from 2.5 – 3.0 feet and 3.5 – 4.0 feet bgs. These additional samples were collected from CS-F3, CS-F4, CS-F6, CS-F8, CS-F11, and CS-F12. The objective of the sampling was to assess the nature, vertical, and horizontal extent of BTEX, TPH, and Chloride concentrations in the subsurface soils. Collected soil was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated MiniRae 3000 photoionization detector (PID) and Hach© chloride QuanTab© test strips, respectively. Each soil sample location was mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Subsequent to field screening, each soil sample was placed directly into glass jars supplied by the laboratory, immediately placed on ice, and hand delivered to Xenco Laboratories in Midland, TX under proper chain-of-custody. Each soil sample was analyzed for BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO; TPH-DRO, and TPH-MRO following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. Analytical results are summarized in Table 1 and the sample locations with analytical results are depicted on Figure 2. Soil boring stratigraphic logs for CS-F3, CS-F4, CS-F6, CS-F8, CS-F11, and CS-F12 are attached as Appendix B.

On November 21, 2019, additional hydrovac excavating was conducted at CS-F4, CS-F9, CS-F10, and CS-W8 based on field screening results and/or visual observations. Activities included the removal of an additional 1-foot of impacted soils down to approximately 1.5 feet bgs in the area of these sample locations. A 5-point composite sample was collected at the bottom of the excavated area at CS-F4 and CS-F10 from 1.5 – 2.0 feet bgs and a grab sample was collected at CS-W8 from 1.5 – 2.0 feet bgs. Each sample was placed directly into pre-cleaned glass jars supplied by the laboratory, immediately placed on ice, and hand delivered to Xenco Laboratories in Midland, TX under proper chain-of-custody. Each soil sample was analyzed for BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO; TPH-DRO, and TPH-MRO following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. Analytical results are summarized in Table 1 and the sample locations with analytical results are depicted on Figure 2. A soil boring stratigraphic log CS-F4 depicting additional excavating and confirmation soil sampling is attached as Appendix B.

Also, on November 21, 2019, ESRR used a soil tiller to blend soil impacted with over spray in the areas to the north and east of the facility's firewall and fence. Three grab confirmation soil samples (CS-W3, CS-W4, and CS-W5) were collected from the perimeter of the over spray areas at 0.0 – 0.5 foot bgs. Collected soil was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach© chloride QuanTab© test strips, respectively. Each soil sample location was mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Subsequent to field screen, each soil sample was placed directly into glass jars supplied by the laboratory, immediately placed on ice, and hand delivered to Xenco Laboratories in Midland, TX under proper chain-of-custody. Each soil sample was analyzed for BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO; TPH-DRO, and TPH-MRO following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. Analytical results are summarized in Table 1 and the sample locations with analytical results are depicted on Figure 2. A photographic log documenting site remediation is Attached as Appendix C.

ANALYTICAL RESULTS

Laboratory analytical results indicted all collected soil samples were compliant with the determined Closure Criteria except for CS-F4 which had GRO+DRO and total TPH concentrations above the criteria limits of 1,000 mg/kg and 2,500 mg/kg, respectfully, and CS-F10 which also had a GRO+DRO concentration above the criteria limit of 1,000 mg/kg. Subsequent hydrovac excavating in the area of these 2 sample locations brought the concentrations down to well below the criteria limits for GRO+DRO and total TPH. Laboratory analytical results are presented on Figure 2 and summarized in Table 1. A certified laboratory report and chain of custody documentation is provided as Appendix D.

CRUDE OIL RELEASE CLOSURE REQUEST: 2RP-5719

The New Mexico Oil Conservation Division's (NMOCD's) *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC) was followed in management of this release. Approximately 70 cubic yards of impacted soil was removed and stockpiled directly within an area lined with polyvinyl, bermed with caliche, and located on the facility's pad and adjacent to the facility. The impacted soil along with containment material will be hauled to and disposed of at the R360 Halfway Site, a NMOCD approved waste facility. Thirty-five delineation, confirmation and wall samples were analyzed to evaluate the nature and extend of the crude oil release that impacted soil both within and outside the facility's firewall containment. Laboratory analytical results indicates existing Benzene, Total BTEX, GRO/DRO, Total TPH, and Chloride in bottom and sidewall samples are below the determined remediation action levels (RALs). This report is an attachment to the Final C-141 For submittal for 2RP-5719. Base on corrective actions performed, ESRR, on behalf of XTO, respectfully requests the NMOCD's permission to backfill and rule that no further action of the Heater Treater Facility's remediated area be granted.

If you have any questions or comments, please do not hesitate to contact Mr. John Fergerson at (432) 701-7307.

Sincerely,
EARTH SYSTEMS RESPONSE & RESTORATION

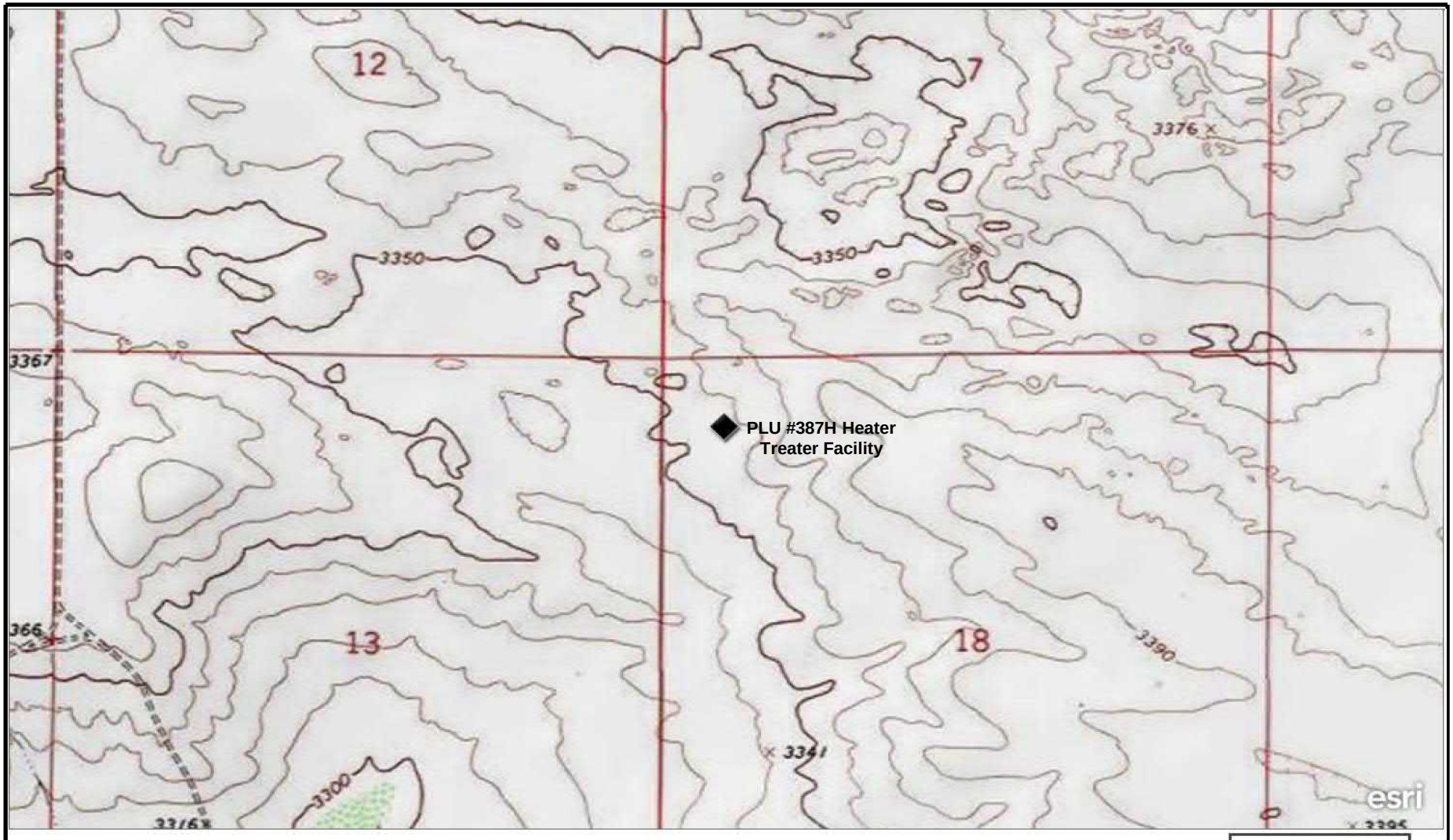
John Fergerson
Senior Project Manager

K. Williams

Kris Williams
Operations Manager

Attachments:
Figure 1: Site Location Map
Figure 2: Site Detail and Analytical Data Map
Table 1: Soil Analytical Results
Attachment A: Initial NMOCD Form C-141 (2RP-5719)
Attachment B: Soil Boring Stratigraphic Logs
Attachment C: Photographic Log
Attachment D: Certified Laboratory Report

cc: Adrian Baker, Safety, Health & Environmental Coordinator, XTO
Kyle Littrell, Safety, Health, & Environmental Supervisor, XTO
Bureau of Land Management



Earth Systems
Response & Restoration

Figure 1: Site Location Topographic Map

XTO Energy, Inc
Poker Lake Unit #387 Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

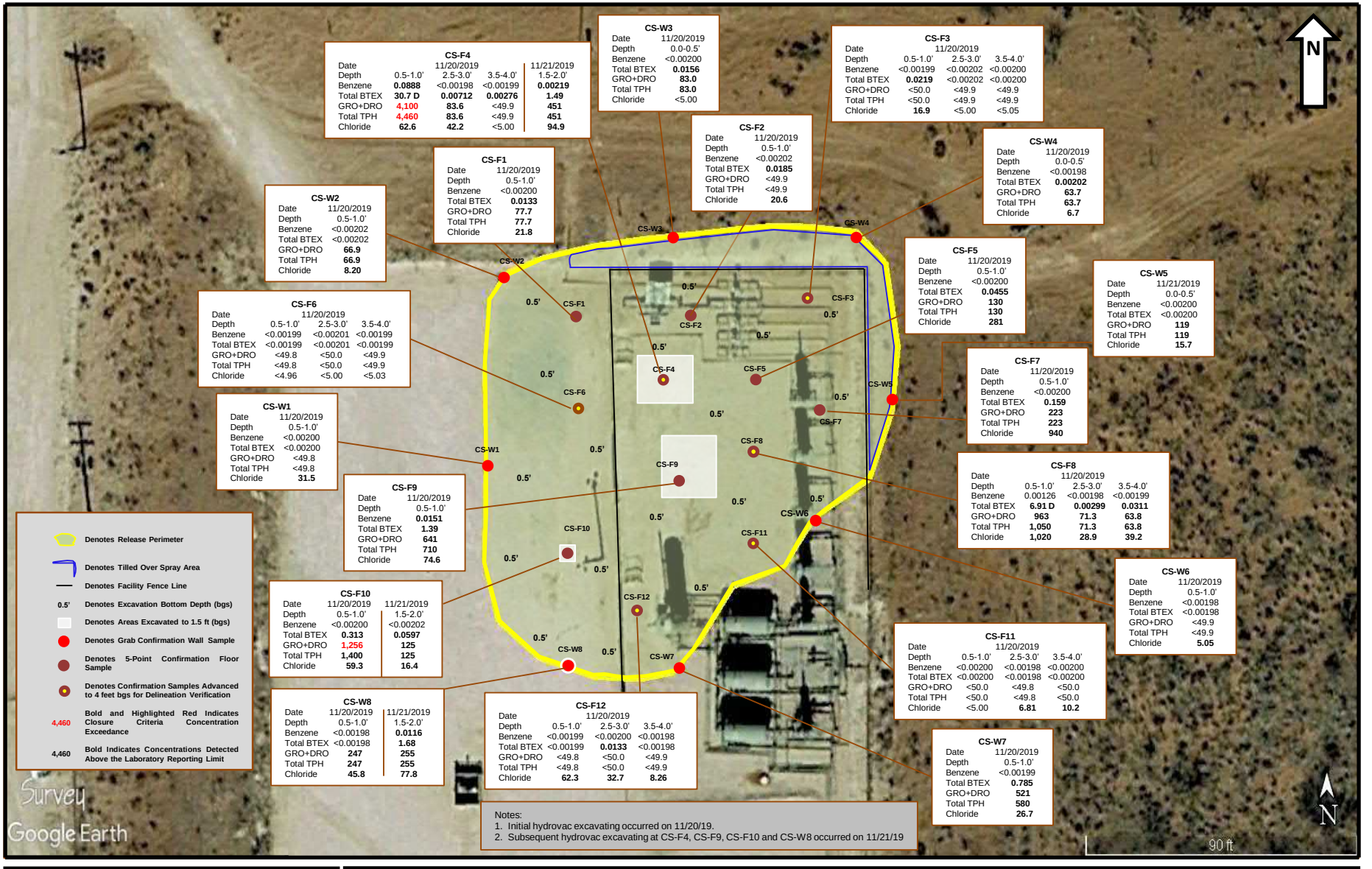


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FIGURE 2: SITE DETAIL AND ANALYTICAL RESULTS MAP

XTO Energy, Inc
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS

XTO ENERGY, INC
POKER LAKE UNIT #387H HEATER TREATER RELEASE
NMOCD[1] REMEDIATION PERMIT NUMBER 2RP-5719
UNIT D, SECTION 18, TOWNSHIP 25 SOUTH, RANGE 31 EAST
EDDY COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (feet bgs[2])	Benzene (mg/kg[3])	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX[4] (mg/kg)	GRO[5] (mg/kg)	DRO[6] (mg/kg)	MRO[7] (mg/kg)	Total GRO+DRO (mg/kg)	Total TPH[8] (mg/kg)	Chloride (mg/kg)
CS-F1	11/20/2019	0.5-1.0	<0.00200	**0.00253**	**0.00283**	**0.00793**	**0.0133**	<49.9	**77.7**	<49.9	**77.7**	**77.7**	**21.8**
CS-F2	11/20/2019	0.5-1.0	<0.00202	**0.00655**	<0.00202	**0.0119**	**0.0185**	<49.9	<49.9	<49.9	<49.9	<49.9	**20.6**
CS-F3	11/20/2019	0.5-1.0	<0.00199	**0.00219**	<0.00199	<0.00199	**0.00219**	<50.0	<50.0	<50.0	<50.0	<50.0	**16.9**
	11/20/2019	2.5-3.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	<5.00
	11/20/2019	3.5-4.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	<5.05
CS-F4	11/20/2019	0.5-1.0	**0.0888**	**4.55 D**	**5.08 D**	**21.0**	**30.7**	**1,190**	**2,910**	**359**	**4,100**	**4,460**	**62.6**
	11/20/2019	2.5-3.0	<0.00198	**0.00592**	**0.00848**	**0.0568**	**0.0712**	<49.9	**83.6**	<49.9	**83.6**	**83.6**	**42.2**
	11/20/2019	3.5-4.0	<0.00199	<0.00199	<0.00199	**0.00276**	**0.00276**	<49.9	<49.9	<49.9	<49.9	<49.9	<5.00
	11/21/2019	1.5-2.0	**0.00219**	**0.145**	**0.173**	**1.17**	**1.49**	**72.2**	**379**	<49.9	**451**	**451**	**94.9**
CS-F5	11/20/2019	0.5-1.0	<0.00200	**0.00461**	**0.00502**	**0.0359**	**0.0455**	<50.0	**130**	<50.0	**130**	**130**	**281**
CS-F6	11/20/2019	0.5-1.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	<4.96
	11/20/2019	2.5-3.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	<5.00
	11/20/2019	3.5-4.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	<5.03
CS-F7	11/20/2019	0.5-1.0	<0.00200	**0.00776**	**0.0435**	**0.108**	**0.159**	<49.8	**223**	<49.8	**223**	**223**	**940**
CS-F8	11/20/2019	0.5-1.0	**0.0126**	**0.932 D**	**0.341 D**	**5.62**	**6.91**	**250**	**713**	**85.8**	**963**	**1,050**	**1,020**
	11/20/2019	2.5-3.0	<0.00198	**0.0101**	<0.00198	**0.0198**	**0.0299**	<49.8	**71.3**	<49.8	**71.3**	**71.3**	**28.9**
	11/20/2019	3.5-4.0	<0.00199	**0.00344**	<0.00199	**0.0277**	**0.0311**	<50.0	**63.8**	<50.0	**63.8**	**63.8**	**39.2**
CS-F9	11/20/2019	0.5-1.0	**0.0151**	**0.352**	**0.209**	**0.810**	**1.39**	**97.7**	**543**	**68.8**	**641**	**710**	**74.6**
CS-F10	11/20/2019	0.5-1.0	<0.00200	**0.00497**	**0.0320**	**0.276**	**0.313**	**136**	**1120**	**145**	**1,256**	**1400**	**59.3**
	11/21/2019	1.5-2.0	<0.00202	**0.00662**	**0.0108**	**0.0423**	**0.0597**	<49.9	**125**	<49.9	**125**	**125**	**16.4**
CS-F11	11/20/2019	0.5-1.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<5.00
	11/20/2019	2.5-3.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	**6.81**
	11/20/2019	3.5-4.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	**10.2**
CS-F12	11/20/2019	0.5-1.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	**62.3**
	11/20/2019	2.5-3.0	<0.00200	**0.00234**	<0.00200	**0.0110**	**0.0133**	<50.0	<50.0	<50.0	<50.0	<50.0	**32.7**
	11/20/2019	3.5-4.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	**8.26**
CS-W1	11/20/2019	0.5-1.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	**31.5**
CS-W2	11/20/2019	0.5-1.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	**66.9**	<49.9	**66.9**	**66.9**	**8.20**
CS-W3	11/21/2019	0.0-0.5	<0.00200	<0.00200	**0.00298**	**0.0126**	**0.0156**	<49.8	**83.0**	<49.8	**83.0**	**83.0**	<5.00
CS-W4	11/21/2019	0.0-0.5	<0.00198	<0.00198	<0.00198	**0.00202**	**0.00202**	<50.0	**63.7**	<50.0	**63.7**	**63.7**	**6.7**

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS

XTO ENERGY, INC
POKER LAKE UNIT #387H HEATER TREATER RELEASE
NMOCD[1] REMEDIATION PERMIT NUMBER 2RP-5719
UNIT D, SECTION 18, TOWNSHIP 25 SOUTH, RANGE 31 EAST
EDDY COUNTY, NEW MEXICO

CS-W5	11/21/2019	0.0 - 0.5	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	**119**	<50.0	**119**	**119**	**15.7**
CS-W6	11/20/2019	0.5-1.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	**5.05**
CS-W7	11/20/2019	0.5-1.0	<0.00199	**0.0864**	**0.124**	**0.575**	**0.785**	**67.7**	**453**	**59.0**	**521**	**580**	**26.7**
CS-W8	11/20/2019	0.5-1.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	**247**	<49.9	**247**	**247**	**45.8**
	11/21/2019	1.5-2.0	**0.0116**	**0.383**	**0.199**	**1.09**	**1.68**	**53.4**	**202**	<50.0	**255**	**255**	**77.8**
NMOCD Table 1[9] Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

1. NMOCD - New Mexico Oil Conservation Division
2. bgs - below ground surface
3. mg/kg - milligrams per kilogram
4. BTEX - benzene, toluene, ethylbenzene, and total xylenes
5. GRO - gasoline range organics
6. DRO - diesel range organics
7. MRO - motor oil range organics
8. TPH - total petroleum hydrocarbons
   < - indicates results below laboratory reporting limits
   D - indicates results from a diluted sample
   Bold denotes concentrations that were detected above the laboratory reporting limits
   Bold and highlighted denotes concentrations that exceed closure criteria concentrations
9. Table 1 - closure criteria for soil impacted by a release per NMAC 19.15.29 August 2018

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NRM1935041942
District RP	2RP-5719
Facility ID	
Application ID	pRM1935042026

Release Notification

03JC9-191025-C-1410

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.135897 Longitude -103.824050
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 387H Battery	Site Type Battery
Date Release Discovered 10/14/2019	API# *(if applicable)* 30-015-41185 (PLU 387H)

Unit Letter	Section	Township	Range	County
D	18	25S	31E	EDDY

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 24.33	Volume Recovered (bbls) 20.00
☐ Produced Water	Volume Released (bbls) 0	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Gasket failed on heater manway releasing oil into berm area. Additional third party resources have been retained to assist in the remediation.

Incident ID	NRM19[illegible]
District RP	2RP-5719
Facility ID	
Application ID	pRM1935042026

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

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/25/19

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Ramona Marcus Date: 12/16/2019

STRATAGRAPHIC LOG (SOIL BORING)

SOIL BORING NO.: CS-F3
CLIENT: XTO Energy, Inc
PROJECT NUMBER: 0169
CONTRACTOR:
DRILLING METHOD: Hand Auger
INSTALLATION DATE: 11/20/19
COMMENTS:

TOTAL DEPTH: 4 Feet
SITE ID: PLU #387H Heater Treater Facility
COUNTY: Eddy
STATE: New Mexico
LAT/LONG:
ESRR FIELD REP: M. Jones

USCS	SAMPLE DATA NUMBER	Cl-	PID	TYPE	DEPTH BGS (FT)	DESCRIPTION: LITHOLOGY, COLOR, GRAIN, SIZE, CONSOLIDATION, DISTINCT FEATURES
						Excavated pad material consisting of: Caliche, light gray
					0.5	
CAL	1	<108 mg/L	12.6 ppm	Comp		Caliche, light gray, pad material, moist, no hydrocarbon odor
					1	
						Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					2	
					2.5	
SP	2	<108 mg/L	4.6 ppm	Grab		Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					3	
					3.5	
	3	<108 mg/L	5.3 ppm	Grab		Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					4	TD Boring @ 4 Feet BGS

STRATAGRAPHIC LOG (SOIL BORING)

SOIL BORING NO.: CS-F4
CLIENT: XTO Energy, Inc
PROJECT NUMBER: 0169
CONTRACTOR:
DRILLING METHOD: Hand Auger
INSTALLATION DATE: 11/20/2019 & 11/21/19
COMMENTS:

TOTAL DEPTH: 4 Feet
SITE ID: PLU #387H Heater Treater Facility
COUNTY: Eddy
STATE: New Mexico
LAT/LONG:
ESRR FIELD REP: M. Jones

USCS	SAMPLE DATA NUMBER	Cl-	PID	TYPE	DEPTH BGS (FT)	DESCRIPTION: LITHOLOGY, COLOR, GRAIN, SIZE, CONSOLIDATION, DISTINCT FEATURES
						Excavated pad material consisting of: Caliche, light gray
CAL					0.5	
	1	<108 mg/L	3491 ppm	Comp	1	Caliche, light gray, pad material, moist, strong hydrocarbon odor (excavated on 11/21/19)
						Sand, yellow orange, vf grain, unconsolidated, sl moist, strong hydrocarbon odor (excavated on 11/21/19)
					1.5	
	2	<108 mg/L	998	Comp	2	Sand, yellow orange, vf grain, unconsolidated, moist, strong hydrocarbon odor (collected on 11/21/19).
					2.5	
SP	3	<108 mg/L	431.4 ppm	Grab	3	Sand, yellow orange, vf grain, unconsolidated, sl moist, mod hydrocarbon odor
					3.5	
	4	<108 mg/L	39.1 ppm	Grab	4	Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
						TD Boring @ 4 Feet BGS

STRATAGRAPHIC LOG (SOIL BORING)

SOIL BORING NO.: CS-F6
CLIENT: XTO Energy, Inc
PROJECT NUMBER: 0169
CONTRACTOR:
DRILLING METHOD: Hand Auger
INSTALLATION DATE: 11/20/19
COMMENTS:

TOTAL DEPTH: 4 Feet
SITE ID: PLU #387H Heater Treater Facility
COUNTY: Eddy
STATE: New Mexico
LAT/LONG:
ESRR FIELD REP: M. Jones

USCS	SAMPLE DATA NUMBER	Cl-	PID	TYPE	DEPTH BGS (FT)	DESCRIPTION: LITHOLOGY, COLOR, GRAIN, SIZE, CONSOLIDATION, DISTINCT FEATURES
						Excavated pad material consisting of: Caliche, light gray
					0.5	
CAL	1	<108 mg/L	3.3 ppm	Comp		Caliche, light gray, pad material, moist, no hydrocarbon odor
					1	
						Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					2	
					2.5	
SP	2	<108 mg/L	1.9 ppm	Grab		Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					3	
					3.5	
	3	<108 mg/L	1.1 ppm	Grab		Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					4	TD Boring @ 4 Feet BGS

STRATAGRAPHIC LOG (SOIL BORING)

SOIL BORING NO.: CS-F8
CLIENT: XTO Energy, Inc
PROJECT NUMBER: 0169
CONTRACTOR:
DRILLING METHOD: Hand Auger
INSTALLATION DATE: 11/20/19
COMMENTS:

TOTAL DEPTH: 4 Feet
SITE ID: PLU #387H Heater Treater Facility
COUNTY: Eddy
STATE: New Mexico
LAT/LONG:
ESRR FIELD REP: M. Jones

USCS	SAMPLE DATA NUMBER	Cl-	PID	TYPE	DEPTH BGS (FT)	DESCRIPTION: LITHOLOGY, COLOR, GRAIN, SIZE, CONSOLIDATION, DISTINCT FEATURES
CAL					0.5	Excavated pad material consisting of: Caliche, light gray
	1	972 mg/L	1226 ppm	Comp	1	Caliche, light gray, pad material, moist, strong hydrocarbon odor
SP					2.5	Sand, yellow orange, vf grain, unconsolidated, sl moist, mod hydrocarbon odor
	2	<108 mg/L	192.6 ppm	Grab	3	Sand, yellow orange, vf grain, unconsolidated, sl moist, sl hydrocarbon odor
					3.5	
	3	<108 mg/L	172.0 ppm	Grab	4	Sand, yellow orange, vf grain, unconsolidated, sl moist, sl hydrocarbon odor
						TD Boring @ 4 Feet BGS

STRATAGRAPHIC LOG (SOIL BORING)

SOIL BORING NO.: CS-F11
CLIENT: XTO Energy, Inc
PROJECT NUMBER: 0169
CONTRACTOR:
DRILLING METHOD: Hand Auger
INSTALLATION DATE: 11/20/19
COMMENTS:

TOTAL DEPTH: 4 Feet
SITE ID: PLU #387H Heater Treater Facility
COUNTY: Eddy
STATE: New Mexico
LAT/LONG:
ESRR FIELD REP: M. Jones

USCS	SAMPLE DATA NUMBER	Cl-	PID	TYPE	DEPTH BGS (FT)	DESCRIPTION: LITHOLOGY, COLOR, GRAIN, SIZE, CONSOLIDATION, DISTINCT FEATURES
						Excavated pad material consisting of: Caliche, light gray
					0.5	
CAL	1	<108 mg/L	20.4	Comp		Caliche, light gray, pad material, moist, no hydrocarbon odor
					1	
						Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					2	
					2.5	
SP	2	<108 mg/L	10.4 ppm	Grab		Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					3	
					3.5	
	3	<108 mg/L	16.2 ppm	Grab		Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					4	TD Boring @ 4 Feet BGS

STRATAGRAPHIC LOG (SOIL BORING)

SOIL BORING NO.: CS-F12
CLIENT: XTO Energy, Inc
PROJECT NUMBER: 0169
CONTRACTOR:
DRILLING METHOD: Hand Auger
INSTALLATION DATE: 11/20/19
COMMENTS:

TOTAL DEPTH: 4 Feet
SITE ID: PLU #387H Heater Treater Facility
COUNTY: Eddy
STATE: New Mexico
LAT/LONG:
ESRR FIELD REP: M. Jones

USCS	SAMPLE DATA NUMBER	Cl-	PID	TYPE	DEPTH BGS (FT)	DESCRIPTION: LITHOLOGY, COLOR, GRAIN, SIZE, CONSOLIDATION, DISTINCT FEATURES
						Excavated pad material consisting of: Caliche, light gray
CAL					0.5	
	1	<108 mg/L	36.9	Comp	1	Caliche, light gray, pad material, moist, no hydrocarbon odor
SP					2.5	Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
	2	<108 mg/L	37.1 ppm	Grab	3	Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
					3.5	
	3	<108 mg/L	44.8 ppm	Grab	4	Sand, yellow orange, vf grain, unconsolidated, sl moist, no hydrocarbon odor
						TD Boring @ 4 Feet BGS

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 1: View of PLU #387H Heater Treater Facility facing east. 10/17/19

PHOTO 2: View of fluid release area inside containment facing north-north east. 10/17/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 3: View of over spray area outside containment facing north. 10/17/19

PHOTO 4: View of fluid release area inside containment facing east. 10/1719

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 5: View of over spray area outside containment facing east. 10/17/19

PHOTO 6: View of over spray area outside containment facing south. 10/17/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 7: View of over spray area inside containment facing west. 10/17/19

PHOTO 8: View of over spray area inside containment facing southwest. 10/17/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 9: View of fluid release source facing south-southwest. 10/17/19

PHOTO 10: View of hydrovac excavating activity facing south. 11/18/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 11: View of hydrovac excavating activity around piping facing north. 11/18/19

PHOTO 12: View of hydrovac excavating activity near release source facing south. 11/18/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 13: View of hydrovac excavating activity facing south. 11/19/19

PHOTO 14: View of hydrovac excavating activity facing south-south west. 11/19/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 15: View of hydrovac excavating activity outside containment facing south. 11/20/19

PHOTO 16: View of hydrovac excavating activity around piping facing east. 11/20/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 17: View of hydrovac excavating activity facing southwest. 11/20/19

PHOTO 18: View of hydrovac excavating activity facing north-northeast. 11/20/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 19: View of hydrovac excavating activity outside containment facing north. 11/21/19

PHOTO 20: View of hydrovac excavating activity inside containment facing north. 11/21/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

PHOTO 21: View of hydrovac excavating activity inside containment facing northeast. 11/21/19

PHOTO 22: View of hydrovac excavating activity inside containment facing south-southwest. 11/21/19

XTO Energy, Inc.
Poker Lake Unit #387H Heater Treater Facility Release
Unit D, Section 18, Township 25 South, Range 31 East
Eddy County, New Mexico

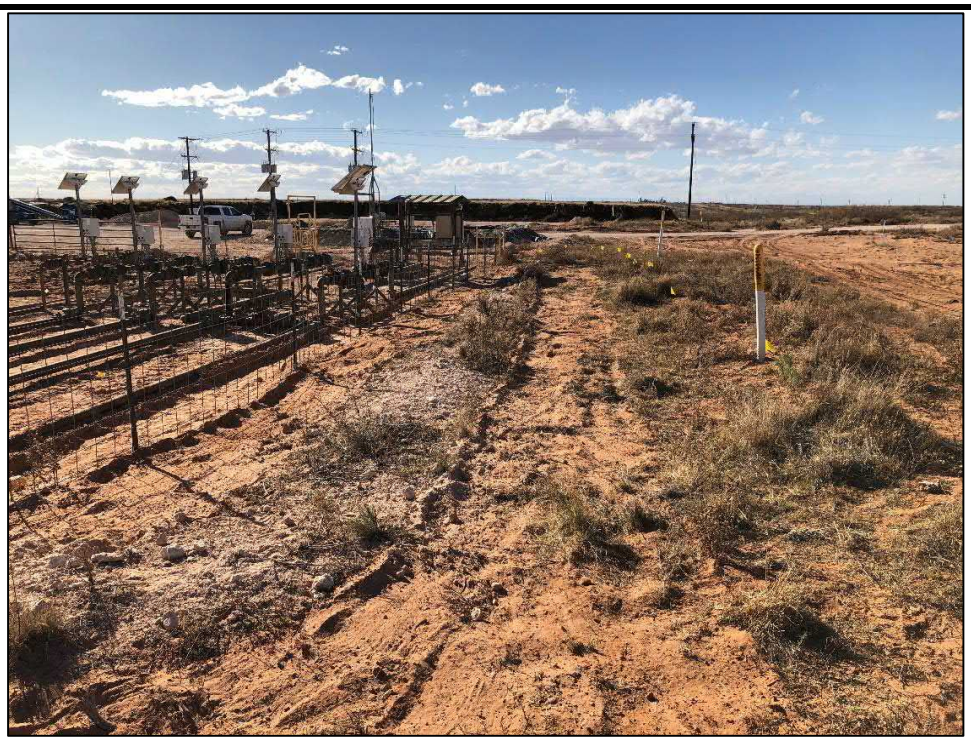

PHOTO 23: View of tilled area outside containment facing west. 11/21/19

PHOTO 24: View of tilled area outside containment (bottom left) facing south-southwest 11/21/19

Analytical Report 644192

for

Earth Systems Response and Restoration

Project Manager: John Fergerson

Poker Lake Unit #387H Heater Treater Release

25-NOV-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

25-NOV-19

Project Manager: **John Fergerson**
Earth Systems Response and Restoration
4115 South County Road 1297
Odessa, TX 79765

Reference: XENCO Report No(s): **644192**
Poker Lake Unit #387H Heater Treater Release
Project Address:

John Fergerson:

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) 644192. 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. 644192 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-W7	S	11-20-19 09:20	0.5 - 1.0 ft	644192-001
CS-F12	S	11-20-19 09:24	0.5 - 1.0 ft	644192-002
CS-F12	S	11-20-19 09:25	2.5 - 3.0 ft	644192-003
CS-F12	S	11-20-19 09:26	3.5 - 4.0 ft	644192-004
CS-F11	S	11-20-19 09:35	0.5 - 1.0 ft	644192-005
CS-F11	S	11-20-19 09:36	2.5 - 3.0 ft	644192-006
CS-F11	S	11-20-19 09:37	3.5 - 41.0 ft	644192-007
CS-W6	S	11-20-19 09:40	0.5 - 1.0 ft	644192-008
CS-F7	S	11-20-19 09:45	0.5 - 1.0 ft	644192-009
CS-F4	S	11-20-19 09:55	0.5 - 1.0 ft	644192-010
CS-F4	S	11-20-19 09:57	2.5 - 3.0 ft	644192-011
CS-F4	S	11-20-19 09:58	3.5 - 4.0 ft	644192-012
CS-F3	S	11-20-19 10:00	0.5 - 1.0 ft	644192-013
CS-F3	S	11-20-19 10:02	2.5 - 3.0 ft	644192-014
CS-F3	S	11-20-19 10:04	3.5 - 4.0 ft	644192-015
CS-F8	S	11-20-19 13:06	0.5 - 1.0 ft	644192-016
CS-F8	S	11-20-19 13:08	2.5 - 3.0 ft	644192-017
CS-F8	S	11-20-19 13:10	3.5 - 4.0 ft	644192-018
CS-F9	S	11-20-19 13:15	0.5 - 1.0 ft	644192-019
CS-F2	S	11-20-19 14:27	0.5 - 1.0 ft	644192-020
CS-F5	S	11-20-19 14:30	0.5 - 1.0 ft	644192-021
CS-W8	S	11-20-19 17:00	0.5 - 1.0 ft	644192-022
CS-W1	S	11-20-19 17:02	0.5 - 1.0 ft	644192-023
CS-W2	S	11-20-19 17:04	0.5 - 1.0 ft	644192-024
CS-F10	S	11-20-19 17:06	0.5 - 1.0 ft	644192-025
CS-F1	S	11-20-19 17:08	0.5 - 1.0 ft	644192-026
CS-F6	S	11-20-19 17:10	0.5 - 1.0 ft	644192-027
CS-F6	S	11-20-19 17:12	2.5 - 3.0 ft	644192-028
CS-F6	S	11-20-19 17:14	3.5 - 4.0 ft	644192-029
CS-F4	S	11-21-19 13:00	1.5 - 2.0 ft	644192-030
CS-W8	S	11-21-19 13:10	1.5 - 2.0 ft	644192-031
CS-F10	S	11-21-19 13:20	1.5 - 2.0 ft	644192-032
CS-W3	S	11-21-19 14:30	0.0 - 0.5 ft	644192-033
CS-W4	S	11-21-19 14:35	0.0 - 0.5 ft	644192-034
CS-W5	S	11-21-19 14:40	0.0 - 0.5 ft	644192-035

Version: 1.%

CASE NARRATIVE

Client Name: Earth Systems Response and Restoration

Project Name: Poker Lake Unit #387H Heater Treater Release

Project ID:
Work Order Number(s): *644192*

Report Date: *25-NOV-19*
Date Received: *11/22/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3108530 BTEX by EPA 8021B
Lab Sample ID 644192-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Toluene recovered below QC limits in the Matrix Spike Duplicate. Benzene recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 644192-001, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 644192-001 S,644192-001 SD,644192-019,644192-009,644192-010,644192-016,644192-018,644192-001.
Surrogate 1,4-Difluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 644192-019,644192-016.

m,p-Xylenes Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 644192-001, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020

Batch: LBA-3108542 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 644192-025,644192-031,644192-030.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3108556 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 644192

Earth Systems Response and Restoration, Odessa, TX

Project Name: Poker Lake Unit #387H Heater Treater Release

Project Id:

Contact: John Fergerson

Project Location:

Date Received in Lab: Fri Nov-22-19 10:56 am

Report Date: 25-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	644192-001		644192-002		644192-003		644192-004		644192-005		644192-006	
	Field Id:	CS-W7		CS-F12		CS-F12		CS-F12		CS-F11		CS-F11	
	Depth:	0.5-1.0 ft		0.5-1.0 ft		2.5-3.0 ft		3.5-4.0 ft		0.5-1.0 ft		2.5-3.0 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-20-19 09:20		Nov-20-19 09:24		Nov-20-19 09:25		Nov-20-19 09:26		Nov-20-19 09:35		Nov-20-19 09:36	
BTEX by EPA 8021B	***Extracted:***	Nov-22-19 12:00		Nov-23-19 16:00		Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00	
	Analyzed:	Nov-22-19 15:02		Nov-24-19 06:00		Nov-22-19 15:42		Nov-22-19 16:02		Nov-22-19 16:22		Nov-22-19 16:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Toluene		0.0864	0.00199	<0.00199	0.00199	0.00234	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Ethylbenzene		0.124	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
m,p-Xylenes		0.398	0.00398	<0.00398	0.00398	0.00576	0.00399	<0.00397	0.00397	<0.00401	0.00401	<0.00397	0.00397
o-Xylene		0.177	0.00199	<0.00199	0.00199	0.00523	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Total Xylenes		0.575	0.00199	<0.00199	0.00199	0.0110	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Total BTEX		0.785	0.00199	<0.00199	0.00199	0.0133	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20	
	Analyzed:	Nov-22-19 15:03		Nov-22-19 15:08		Nov-22-19 15:24		Nov-22-19 15:30		Nov-22-19 15:35		Nov-22-19 15:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		26.7	5.02	62.3	5.05	32.7	4.98	8.26	4.96	<5.00	5.00	6.81	5.00
TPH by SW8015 Mod	***Extracted:***	Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00	
	Analyzed:	Nov-22-19 21:47		Nov-22-19 22:43		Nov-22-19 23:02		Nov-22-19 23:21		Nov-22-19 23:40		Nov-22-19 23:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		67.7	50.0	<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8
Diesel Range Organics (DRO)		453	50.0	<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		59.0	50.0	<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8
Total TPH		580	50.0	<49.8	49.8	<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 644192

Earth Systems Response and Restoration, Odessa, TX

Project Name: Poker Lake Unit #387H Heater Treater Release

Project Id:

Contact: John Fergerson

Project Location:

Date Received in Lab: Fri Nov-22-19 10:56 am

Report Date: 25-NOV-19

Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	644192-007		644192-008		644192-009		644192-010		644192-011		644192-012	
	Field Id:	CS-F11		CS-W6		CS-F7		CS-F4		CS-F4		CS-F4	
	Depth:	3.5-41.0 ft		0.5-1.0 ft		0.5-1.0 ft		0.5-1.0 ft		2.5-3.0 ft		3.5-4.0 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-20-19 09:37		Nov-20-19 09:40		Nov-20-19 09:45		Nov-20-19 09:55		Nov-20-19 09:57		Nov-20-19 09:58	
BTEX by EPA 8021B	*Extracted:*	Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00	
	Analyzed:	Nov-22-19 17:03		Nov-22-19 17:23		Nov-22-19 17:43		Nov-22-19 18:03		Nov-22-19 19:21		Nov-22-19 19:41	
	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	<0.00198	0.00198	<0.00200	0.00200	0.0888	0.00199	<0.00198	0.00198	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00198	0.00198	0.00776	0.00200	4.55 D	0.199	0.00592	0.00198	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	0.0435	0.00200	5.08 D	0.199	0.00848	0.00198	<0.00199	0.00199
m,p-Xylenes		<0.00400	0.00400	<0.00397	0.00397	0.0395	0.00399	15.0 D	0.398	0.0388	0.00396	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	0.0680	0.00200	6.02 D	0.199	0.0180	0.00198	0.00276	0.00199
Total Xylenes		<0.00200	0.00200	<0.00198	0.00198	0.108	0.00200	21.0	0.199	0.0568	0.00198	0.00276	0.00199
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	0.159	0.00200	30.7	0.00199	0.0712	0.00198	0.00276	0.00199
TPH by SW8015 Mod	*Extracted:*	Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00	
	Analyzed:	Nov-23-19 00:17		Nov-23-19 00:36		Nov-23-19 00:54		Nov-23-19 01:13		Nov-23-19 01:52		Nov-23-19 02:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<49.8	49.8	1190	50.0	<49.9	49.9	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	223	49.8	2910	50.0	83.6	49.9	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<49.8	49.8	359	50.0	<49.9	49.9	<49.9	49.9
Total TPH		<50.0	50.0	<49.9	49.9	223	49.8	4460	50.0	83.6	49.9	<49.9	49.9

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 644192

Earth Systems Response and Restoration, Odessa, TX

Project Name: Poker Lake Unit #387H Heater Treater Release

Project Id:

Contact: John Fergerson

Project Location:

Date Received in Lab: Fri Nov-22-19 10:56 am

Report Date: 25-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	644192-007		644192-008		644192-009		644192-010		644192-011		644192-012	
	Field Id:	CS-F11		CS-W6		CS-F7		CS-F4		CS-F4		CS-F4	
	Depth:	3.5-41.0 ft		0.5-1.0 ft		0.5-1.0 ft		0.5-1.0 ft		2.5-3.0 ft		3.5-4.0 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-20-19 09:37		Nov-20-19 09:40		Nov-20-19 09:45		Nov-20-19 09:55		Nov-20-19 09:57		Nov-20-19 09:58	
Chloride by EPA 300	***Extracted:***	Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 15:10		Nov-22-19 15:10		Nov-22-19 15:10	
	Analyzed:	Nov-22-19 15:46		Nov-22-19 15:51		Nov-22-19 15:56		Nov-22-19 16:28		Nov-22-19 16:44		Nov-22-19 18:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10.2	5.00	5.05	5.04	940	5.01	62.6	5.02	42.2	4.96	<5.00	5.00

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Version: 1.%

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Project Assistant

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Earth Systems Response and Restoration, Odessa, TX

Project Name: Poker Lake Unit #387H Heater Treater Release

Project Id:

Contact: John Fergerson

Project Location:

Date Received in Lab: Fri Nov-22-19 10:56 am

Report Date: 25-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	644192-013		644192-014		644192-015		644192-016		644192-017		644192-018	
	Field Id:	CS-F3		CS-F3		CS-F3		CS-F8		CS-F8		CS-F8	
	Depth:	0.5-1.0 ft		2.5-3.0 ft		3.5-4.0 ft		0.5-1.0 ft		2.5-3.0 ft		3.5-4.0 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-20-19 10:00		Nov-20-19 10:02		Nov-20-19 10:04		Nov-20-19 13:06		Nov-20-19 13:08		Nov-20-19 13:10	
BTEX by EPA 8021B	***Extracted:***	Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:00	
	Analyzed:	Nov-22-19 20:02		Nov-22-19 20:22		Nov-22-19 20:42		Nov-22-19 21:02		Nov-22-19 21:22		Nov-22-19 21:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	0.0126	0.00201	<0.00198	0.00198	<0.00199	0.00199
Toluene		0.00219	0.00199	<0.00202	0.00202	<0.00200	0.00200	0.932 D	0.0201	0.0101	0.00198	0.00344	0.00199
Ethylbenzene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	0.341 D	0.0201	<0.00198	0.00198	<0.00199	0.00199
m,p-Xylenes		<0.00398	0.00398	<0.00404	0.00404	<0.00401	0.00401	3.97 D	0.0402	0.0123	0.00396	0.0103	0.00398
o-Xylene		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	1.65 D	0.0201	0.00747	0.00198	0.0174	0.00199
Total Xylenes		<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	5.62	0.0201	0.0198	0.00198	0.0277	0.00199
Total BTEX		0.00219	0.00199	<0.00202	0.00202	<0.00200	0.00200	6.91	0.00201	0.0299	0.00198	0.0311	0.00199
Chloride by EPA 300	***Extracted:***	Nov-22-19 15:10		Nov-22-19 15:10		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30	
	Analyzed:	Nov-22-19 18:36		Nov-22-19 18:42		Nov-22-19 16:24		Nov-22-19 16:44		Nov-22-19 16:51		Nov-22-19 16:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		16.9	5.00	<5.00	5.00	<5.05	5.05	1020	5.04	28.9	5.01	39.2	4.96
TPH by SW8015 Mod	***Extracted:***	Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 15:00	
	Analyzed:	Nov-23-19 02:30		Nov-23-19 02:49		Nov-23-19 03:09		Nov-23-19 03:27		Nov-23-19 03:46		Nov-23-19 04:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	250	50.0	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	713	50.0	71.3	49.8	63.8	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<49.9	49.9	85.8	50.0	<49.8	49.8	<50.0	50.0
Total TPH		<50.0	50.0	<49.9	49.9	<49.9	49.9	1050	50.0	71.3	49.8	63.8	50.0

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 644192

Earth Systems Response and Restoration, Odessa, TX

Project Name: Poker Lake Unit #387H Heater Treater Release

Project Id:

Contact: John Fergerson

Project Location:

Date Received in Lab: Fri Nov-22-19 10:56 am

Report Date: 25-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	644192-019		644192-020		644192-021		644192-022		644192-023		644192-024	
	Field Id:	CS-F9		CS-F2		CS-F5		CS-W8		CS-W1		CS-W2	
	Depth:	0.5-1.0 ft		0.5-1.0 ft		0.5-1.0 ft		0.5-1.0 ft		0.5-1.0 ft		0.5-1.0 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-20-19 13:15		Nov-20-19 14:27		Nov-20-19 14:30		Nov-20-19 17:00		Nov-20-19 17:02		Nov-20-19 17:04	
BTEX by EPA 8021B	***Extracted:***	Nov-22-19 12:00		Nov-22-19 12:00		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20	
	Analyzed:	Nov-22-19 22:02		Nov-22-19 22:22		Nov-22-19 15:52		Nov-22-19 16:13		Nov-22-19 16:33		Nov-22-19 16:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.0151	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Toluene		0.352	0.00200	0.00655	0.00202	0.00461	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		0.209	0.00200	<0.00202	0.00202	0.00502	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		0.553	0.00400	0.00869	0.00403	0.0247	0.00399	<0.00397	0.00397	<0.00401	0.00401	<0.00404	0.00404
o-Xylene		0.257	0.00200	0.00324	0.00202	0.0112	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		0.810	0.00200	0.0119	0.00202	0.0359	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		1.39	0.00200	0.0185	0.00202	0.0455	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30	
	Analyzed:	Nov-22-19 17:04		Nov-22-19 17:24		Nov-22-19 17:31		Nov-22-19 17:37		Nov-22-19 17:44		Nov-22-19 17:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		74.6	5.00	20.6	4.98	281	4.99	45.8	5.03	31.5	4.96	8.20	4.95
TPH by SW8015 Mod	***Extracted:***	Nov-22-19 15:00		Nov-22-19 15:00		Nov-22-19 11:00		Nov-22-19 11:00		Nov-22-19 11:00		Nov-22-19 11:00	
	Analyzed:	Nov-23-19 04:24		Nov-23-19 04:43		Nov-22-19 15:12		Nov-22-19 15:30		Nov-22-19 15:49		Nov-22-19 16:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		97.7	49.9	<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.9	49.9
Diesel Range Organics (DRO)		543	49.9	<49.9	49.9	130	50.0	247	49.9	<49.8	49.8	66.9	49.9
Motor Oil Range Hydrocarbons (MRO)		68.8	49.9	<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.9	49.9
Total TPH		710	49.9	<49.9	49.9	130	50.0	247	49.9	<49.8	49.8	66.9	49.9

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 644192

Earth Systems Response and Restoration, Odessa, TX

Project Name: Poker Lake Unit #387H Heater Treater Release

Project Id:

Contact: John Fergerson

Project Location:

Date Received in Lab: Fri Nov-22-19 10:56 am

Report Date: 25-NOV-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	644192-025		644192-026		644192-027		644192-028		644192-029		644192-030	
	Field Id:	CS-F10		CS-F1		CS-F6		CS-F6		CS-F6		CS-F4	
	Depth:	0.5-1.0 ft		0.5-1.0 ft		0.5-1.0 ft		2.5-3.0 ft		3.5-4.0 ft		1.5-2.0 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-20-19 17:06		Nov-20-19 17:08		Nov-20-19 17:10		Nov-20-19 17:12		Nov-20-19 17:14		Nov-21-19 13:00	
BTEX by EPA 8021B	***Extracted:***	Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20	
	Analyzed:	Nov-22-19 17:13		Nov-22-19 17:33		Nov-22-19 17:53		Nov-22-19 18:13		Nov-22-19 18:33		Nov-22-19 18:54	
	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	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	0.00219	0.00200
Toluene		0.00497	0.00200	0.00253	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	0.145	0.00200
Ethylbenzene		0.0320	0.00200	0.00283	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	0.173	0.00200
m,p-Xylenes		0.180	0.00401	<0.00401	0.00401	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398	0.787	0.00400
o-Xylene		0.0957	0.00200	0.00793	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	0.385	0.00200
Total Xylenes		0.276	0.00200	0.00793	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	1.17	0.00200
Total BTEX		0.313	0.00200	0.0133	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	1.49	0.00200
Chloride by EPA 300	***Extracted:***	Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30	
	Analyzed:	Nov-22-19 17:57		Nov-22-19 18:17		Nov-22-19 18:24		Nov-22-19 18:44		Nov-22-19 18:51		Nov-22-19 18:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		59.3	4.95	21.8	4.99	<4.96	4.96	<5.00	5.00	<5.03	5.03	94.9	5.05
TPH by SW8015 Mod	***Extracted:***	Nov-22-19 11:00		Nov-22-19 11:00		Nov-22-19 11:00		Nov-22-19 11:00		Nov-22-19 11:00		Nov-22-19 11:00	
	Analyzed:	Nov-22-19 16:26		Nov-22-19 16:45		Nov-22-19 17:22		Nov-22-19 17:40		Nov-22-19 17:59		Nov-22-19 18:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		136	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	72.2	49.9
Diesel Range Organics (DRO)		1120	50.0	77.7	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	379	49.9
Motor Oil Range Hydrocarbons (MRO)		145	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	<49.9	49.9
Total TPH		1400	50.0	77.7	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9	451	49.9

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 644192

Earth Systems Response and Restoration, Odessa, TX

Project Name: Poker Lake Unit #387H Heater Treater Release

Project Id:

Contact: John Fergerson

Project Location:

Date Received in Lab: Fri Nov-22-19 10:56 am

Report Date: 25-NOV-19

Project Manager: Jessica Kramer

Analysis Requested																	
	Lab Id:	644192-031		644192-032		644192-033		644192-034		644192-035							
	Field Id:	CS-W8		CS-F10		CS-W3		CS-W4		CS-W5							
	Depth:	1.5-2.0 ft		1.5-2.0 ft		0.0-0.5 ft		0.0-0.5 ft		0.0-0.5 ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL							
	Sampled:	Nov-21-19 13:10		Nov-21-19 13:20		Nov-21-19 14:30		Nov-21-19 14:35		Nov-21-19 14:40							
BTEX by EPA 8021B	***Extracted:***	Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20		Nov-22-19 12:20							
	Analyzed:	Nov-22-19 20:12		Nov-22-19 20:33		Nov-22-19 20:53		Nov-22-19 21:13		Nov-22-19 21:33							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		0.0116	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200						
Toluene		0.383	0.00200	0.00662	0.00202	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200						
Ethylbenzene		0.199	0.00200	0.0108	0.00202	0.00298	0.00200	<0.00198	0.00198	<0.00200	0.00200						
m,p-Xylenes		0.782	0.00400	0.0224	0.00403	0.00795	0.00401	<0.00397	0.00397	<0.00399	0.00399						
o-Xylene		0.306	0.00200	0.0199	0.00202	0.00464	0.00200	0.00202	0.00198	<0.00200	0.00200						
Total Xylenes		1.09	0.00200	0.0423	0.00202	0.0126	0.00200	0.00202	0.00198	<0.00200	0.00200						
Total BTEX		1.68	0.00200	0.0597	0.00202	0.0156	0.00200	0.00202	0.00198	<0.00200	0.00200						
Chloride by EPA 300	***Extracted:***	Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:30		Nov-22-19 15:45							
	Analyzed:	Nov-22-19 19:04		Nov-22-19 19:10		Nov-22-19 19:17		Nov-22-19 19:24		Nov-22-19 20:04							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		77.8	4.98	16.4	4.96	<5.00	5.00	6.70	5.00	15.7	4.96						
TPH by SW8015 Mod	***Extracted:***	Nov-22-19 11:00		Nov-22-19 11:00		Nov-22-19 11:00		Nov-22-19 11:00		Nov-22-19 11:00							
	Analyzed:	Nov-22-19 18:37		Nov-22-19 18:55		Nov-22-19 19:14		Nov-22-19 19:34		Nov-22-19 19:53							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		53.4	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0						
Diesel Range Organics (DRO)		202	50.0	125	49.9	83.0	49.8	63.7	50.0	119	50.0						
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0						
Total TPH		255	50.0	125	49.9	83.0	49.8	63.7	50.0	119	50.0						

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W7**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-001	Date Collected:	11.20.19 09.20	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.7**	5.02	mg/kg	11.22.19 15.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**67.7**	50.0	mg/kg	11.22.19 21.47		1
Diesel Range Organics (DRO)	C10C28DRO	**453**	50.0	mg/kg	11.22.19 21.47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**59.0**	50.0	mg/kg	11.22.19 21.47		1
Total TPH	PHC635	**580**	50.0	mg/kg	11.22.19 21.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	11.22.19 21.47	
o-Terphenyl	84-15-1	129	%	70-135	11.22.19 21.47	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W7**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-001	Date Collected:	11.20.19 09.20	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.22.19 15.02	U	1
Toluene	108-88-3	**0.0864**	0.00199	mg/kg	11.22.19 15.02		1
Ethylbenzene	100-41-4	**0.124**	0.00199	mg/kg	11.22.19 15.02		1
m,p-Xylenes	179601-23-1	**0.398**	0.00398	mg/kg	11.22.19 15.02		1
o-Xylene	95-47-6	**0.177**	0.00199	mg/kg	11.22.19 15.02		1
Total Xylenes	1330-20-7	**0.575**	0.00199	mg/kg	11.22.19 15.02		1
Total BTEX		**0.785**	0.00199	mg/kg	11.22.19 15.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	70-130	11.22.19 15.02	
4-Bromofluorobenzene	460-00-4	212	%	70-130	11.22.19 15.02	**

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F12**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-002	Date Collected:	11.20.19 09.24	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.3**	5.05	mg/kg	11.22.19 15.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.22.19 22.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.22.19 22.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.22.19 22.43	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.22.19 22.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	11.22.19 22.43	
o-Terphenyl	84-15-1	113	%	70-135	11.22.19 22.43	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F12**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-002	Date Collected:	11.20.19 09.24	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.23.19 16.00	Basis:	Wet Weight
Seq Number:	3108556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.24.19 06.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.24.19 06.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.24.19 06.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.24.19 06.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.24.19 06.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.24.19 06.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.24.19 06.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	11.24.19 06.00	
1,4-Difluorobenzene	540-36-3	115	%	70-130	11.24.19 06.00	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F12**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-003	Date Collected:	11.20.19 09.25	Sample Depth:	2.5 - 3.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.7**	4.98	mg/kg	11.22.19 15.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.22.19 23.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.22.19 23.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.22.19 23.02	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.22.19 23.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	11.22.19 23.02	
o-Terphenyl	84-15-1	111	%	70-135	11.22.19 23.02	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F12**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-003	Date Collected:	11.20.19 09.25	Sample Depth:	2.5 - 3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 15.42	U	1
Toluene	108-88-3	**0.00234**	0.00200	mg/kg	11.22.19 15.42		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.22.19 15.42	U	1
m,p-Xylenes	179601-23-1	**0.00576**	0.00399	mg/kg	11.22.19 15.42		1
o-Xylene	95-47-6	**0.00523**	0.00200	mg/kg	11.22.19 15.42		1
Total Xylenes	1330-20-7	**0.0110**	0.00200	mg/kg	11.22.19 15.42		1
Total BTEX		**0.0133**	0.00200	mg/kg	11.22.19 15.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.22.19 15.42	
1,4-Difluorobenzene	540-36-3	83	%	70-130	11.22.19 15.42	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F12**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-004	Date Collected:	11.20.19 09.26	Sample Depth:	3.5 - 4.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.26**	4.96	mg/kg	11.22.19 15.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.22.19 23.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.22.19 23.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.22.19 23.21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.22.19 23.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	11.22.19 23.21	
o-Terphenyl	84-15-1	110	%	70-135	11.22.19 23.21	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F12**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-004	Date Collected:	11.20.19 09.26	Sample Depth:	3.5 - 4.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.22.19 16.02	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.22.19 16.02	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.22.19 16.02	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.22.19 16.02	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.22.19 16.02	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.22.19 16.02	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.22.19 16.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	11.22.19 16.02	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.22.19 16.02	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F11**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-005	Date Collected:	11.20.19 09.35	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	11.22.19 15.35	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.22.19 23.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.22.19 23.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.22.19 23.40	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.22.19 23.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	11.22.19 23.40	
o-Terphenyl	84-15-1	111	%	70-135	11.22.19 23.40	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F11**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-005	Date Collected:	11.20.19 09.35	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 16.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.22.19 16.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.22.19 16.22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.22.19 16.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.22.19 16.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.22.19 16.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.22.19 16.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	11.22.19 16.22	
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.22.19 16.22	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F11**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-006	Date Collected:	11.20.19 09.36	Sample Depth:	2.5 - 3.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.81**	5.00	mg/kg	11.22.19 15.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.22.19 23.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.22.19 23.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.22.19 23.58	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.22.19 23.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	11.22.19 23.58	
o-Terphenyl	84-15-1	114	%	70-135	11.22.19 23.58	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F11**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-006	Date Collected:	11.20.19 09.36	Sample Depth:	2.5 - 3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.22.19 16.43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.22.19 16.43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.22.19 16.43	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.22.19 16.43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.22.19 16.43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.22.19 16.43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.22.19 16.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	11.22.19 16.43	
1,4-Difluorobenzene	540-36-3	108	%	70-130	11.22.19 16.43	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F11**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-007	Date Collected:	11.20.19 09.37	Sample Depth:	3.5 - 41.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.2**	5.00	mg/kg	11.22.19 15.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.23.19 00.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.23.19 00.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.23.19 00.17	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.23.19 00.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	11.23.19 00.17	
o-Terphenyl	84-15-1	110	%	70-135	11.23.19 00.17	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F11**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-007	Date Collected:	11.20.19 09.37	Sample Depth:	3.5 - 41.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 17.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.22.19 17.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.22.19 17.03	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	11.22.19 17.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.22.19 17.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.22.19 17.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.22.19 17.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	11.22.19 17.03	
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.22.19 17.03	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W6**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-008	Date Collected:	11.20.19 09.40	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.05**	5.04	mg/kg	11.22.19 15.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.23.19 00.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.23.19 00.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.23.19 00.36	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.23.19 00.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	11.23.19 00.36	
o-Terphenyl	84-15-1	111	%	70-135	11.23.19 00.36	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W6**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-008	Date Collected:	11.20.19 09.40	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.22.19 17.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.22.19 17.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.22.19 17.23	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.22.19 17.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.22.19 17.23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.22.19 17.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.22.19 17.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	11.22.19 17.23	
1,4-Difluorobenzene	540-36-3	109	%	70-130	11.22.19 17.23	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F7**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-009	Date Collected:	11.20.19 09.45	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**940**	5.01	mg/kg	11.22.19 15.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.23.19 00.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	**223**	49.8	mg/kg	11.23.19 00.54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.23.19 00.54	U	1
Total TPH	PHC635	**223**	49.8	mg/kg	11.23.19 00.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	11.23.19 00.54	
o-Terphenyl	84-15-1	119	%	70-135	11.23.19 00.54	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F7**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-009	Date Collected:	11.20.19 09.45	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 17.43	U	1
Toluene	108-88-3	**0.00776**	0.00200	mg/kg	11.22.19 17.43		1
Ethylbenzene	100-41-4	**0.0435**	0.00200	mg/kg	11.22.19 17.43		1
m,p-Xylenes	179601-23-1	**0.0395**	0.00399	mg/kg	11.22.19 17.43		1
o-Xylene	95-47-6	**0.0680**	0.00200	mg/kg	11.22.19 17.43		1
Total Xylenes	1330-20-7	**0.108**	0.00200	mg/kg	11.22.19 17.43		1
Total BTEX		**0.159**	0.00200	mg/kg	11.22.19 17.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.22.19 17.43	
4-Bromofluorobenzene	460-00-4	149	%	70-130	11.22.19 17.43	**

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-010	Date Collected:	11.20.19 09.55	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.10	Basis:	Wet Weight
Seq Number:	3108491				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.6**	5.02	mg/kg	11.22.19 16.28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1190**	50.0	mg/kg	11.23.19 01.13		1
Diesel Range Organics (DRO)	C10C28DRO	**2910**	50.0	mg/kg	11.23.19 01.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**359**	50.0	mg/kg	11.23.19 01.13		1
Total TPH	PHC635	**4460**	50.0	mg/kg	11.23.19 01.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	11.23.19 01.13	
o-Terphenyl	84-15-1	128	%	70-135	11.23.19 01.13	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-010	Date Collected:	11.20.19 09.55	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0888**	0.00199	mg/kg	11.22.19 18.03		1
Toluene	108-88-3	**4.55**	0.199	mg/kg	11.24.19 06.20	D	100
Ethylbenzene	100-41-4	**5.08**	0.199	mg/kg	11.24.19 06.20	D	100
m,p-Xylenes	179601-23-1	**15.0**	0.398	mg/kg	11.24.19 06.20	D	100
o-Xylene	95-47-6	**6.02**	0.199	mg/kg	11.24.19 06.20	D	100
Total Xylenes	1330-20-7	**21.0**	0.199	mg/kg	11.24.19 06.20		100
Total BTEX		**30.7**	0.00199	mg/kg	11.24.19 06.20		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	753	%	70-130	11.22.19 18.03	**
1,4-Difluorobenzene	540-36-3	120	%	70-130	11.22.19 18.03	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-011	Date Collected:	11.20.19 09.57	Sample Depth:	2.5 - 3.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.10	Basis:	Wet Weight
Seq Number:	3108491				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.2**	4.96	mg/kg	11.22.19 16.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.23.19 01.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**83.6**	49.9	mg/kg	11.23.19 01.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.23.19 01.52	U	1
Total TPH	PHC635	**83.6**	49.9	mg/kg	11.23.19 01.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	11.23.19 01.52	
o-Terphenyl	84-15-1	107	%	70-135	11.23.19 01.52	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-011	Date Collected:	11.20.19 09.57	Sample Depth:	2.5 - 3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.22.19 19.21	U	1
Toluene	108-88-3	**0.00592**	0.00198	mg/kg	11.22.19 19.21		1
Ethylbenzene	100-41-4	**0.00848**	0.00198	mg/kg	11.22.19 19.21		1
m,p-Xylenes	179601-23-1	**0.0388**	0.00396	mg/kg	11.22.19 19.21		1
o-Xylene	95-47-6	**0.0180**	0.00198	mg/kg	11.22.19 19.21		1
Total Xylenes	1330-20-7	**0.0568**	0.00198	mg/kg	11.22.19 19.21		1
Total BTEX		**0.0712**	0.00198	mg/kg	11.22.19 19.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	11.22.19 19.21	
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.22.19 19.21	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-012	Date Collected:	11.20.19 09.58	Sample Depth:	3.5 - 4.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.10	Basis:	Wet Weight
Seq Number:	3108491				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	11.22.19 18.31	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.23.19 02.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.23.19 02.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.23.19 02.11	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.23.19 02.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	11.23.19 02.11	
o-Terphenyl	84-15-1	109	%	70-135	11.23.19 02.11	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-012	Date Collected:	11.20.19 09.58	Sample Depth:	3.5 - 4.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.22.19 19.41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.22.19 19.41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.22.19 19.41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.22.19 19.41	U	1
o-Xylene	95-47-6	**0.00276**	0.00199	mg/kg	11.22.19 19.41		1
Total Xylenes	1330-20-7	**0.00276**	0.00199	mg/kg	11.22.19 19.41		1
Total BTEX		**0.00276**	0.00199	mg/kg	11.22.19 19.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.22.19 19.41	
1,4-Difluorobenzene	540-36-3	111	%	70-130	11.22.19 19.41	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F3**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-013	Date Collected:	11.20.19 10.00	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.10	Basis:	Wet Weight
Seq Number:	3108491				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.9**	5.00	mg/kg	11.22.19 18.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.23.19 02.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.23.19 02.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.23.19 02.30	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.23.19 02.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	11.23.19 02.30	
o-Terphenyl	84-15-1	111	%	70-135	11.23.19 02.30	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F3**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-013	Date Collected:	11.20.19 10.00	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.22.19 20.02	U	1
Toluene	108-88-3	**0.00219**	0.00199	mg/kg	11.22.19 20.02		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.22.19 20.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.22.19 20.02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.22.19 20.02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.22.19 20.02	U	1
Total BTEX		**0.00219**	0.00199	mg/kg	11.22.19 20.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.22.19 20.02	
1,4-Difluorobenzene	540-36-3	115	%	70-130	11.22.19 20.02	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F3**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-014	Date Collected:	11.20.19 10.02	Sample Depth:	2.5 - 3.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.10	Basis:	Wet Weight
Seq Number:	3108491				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	11.22.19 18.42	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.23.19 02.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.23.19 02.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.23.19 02.49	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.23.19 02.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	11.23.19 02.49	
o-Terphenyl	84-15-1	111	%	70-135	11.23.19 02.49	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F3**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-014	Date Collected:	11.20.19 10.02	Sample Depth:	2.5 - 3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.22.19 20.22	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.22.19 20.22	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.22.19 20.22	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	11.22.19 20.22	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.22.19 20.22	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	11.22.19 20.22	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.22.19 20.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	11.22.19 20.22	
4-Bromofluorobenzene	460-00-4	105	%	70-130	11.22.19 20.22	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F3**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-015	Date Collected:	11.20.19 10.04	Sample Depth:	3.5 - 4.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	11.22.19 16.24	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.23.19 03.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.23.19 03.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.23.19 03.09	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.23.19 03.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	11.23.19 03.09	
o-Terphenyl	84-15-1	106	%	70-135	11.23.19 03.09	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F3**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-015	Date Collected:	11.20.19 10.04	Sample Depth:	3.5 - 4.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 20.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.22.19 20.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.22.19 20.42	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.22.19 20.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.22.19 20.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.22.19 20.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.22.19 20.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	11.22.19 20.42	
1,4-Difluorobenzene	540-36-3	113	%	70-130	11.22.19 20.42	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-016	Date Collected:	11.20.19 13.06	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1020**	5.04	mg/kg	11.22.19 16.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**250**	50.0	mg/kg	11.23.19 03.27		1
Diesel Range Organics (DRO)	C10C28DRO	**713**	50.0	mg/kg	11.23.19 03.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**85.8**	50.0	mg/kg	11.23.19 03.27		1
Total TPH	PHC635	**1050**	50.0	mg/kg	11.23.19 03.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	11.23.19 03.27	
o-Terphenyl	84-15-1	120	%	70-135	11.23.19 03.27	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-016	Date Collected:	11.20.19 13.06	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0126**	0.00201	mg/kg	11.22.19 21.02		1
Toluene	108-88-3	**0.932**	0.0201	mg/kg	11.24.19 06.40	D	10
Ethylbenzene	100-41-4	**0.341**	0.0201	mg/kg	11.24.19 06.40	D	10
m,p-Xylenes	179601-23-1	**3.97**	0.0402	mg/kg	11.24.19 06.40	D	10
o-Xylene	95-47-6	**1.65**	0.0201	mg/kg	11.24.19 06.40	D	10
Total Xylenes	1330-20-7	**5.62**	0.0201	mg/kg	11.24.19 06.40		10
Total BTEX		**6.91**	0.00201	mg/kg	11.24.19 06.40		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	333	%	70-130	11.22.19 21.02	**
1,4-Difluorobenzene	540-36-3	140	%	70-130	11.22.19 21.02	**

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-017	Date Collected:	11.20.19 13.08	Sample Depth:	2.5 - 3.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.9**	5.01	mg/kg	11.22.19 16.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.23.19 03.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**71.3**	49.8	mg/kg	11.23.19 03.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.23.19 03.46	U	1
Total TPH	PHC635	**71.3**	49.8	mg/kg	11.23.19 03.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	11.23.19 03.46	
o-Terphenyl	84-15-1	114	%	70-135	11.23.19 03.46	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-017	Date Collected:	11.20.19 13.08	Sample Depth:	2.5 - 3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.22.19 21.22	U	1
Toluene	108-88-3	**0.0101**	0.00198	mg/kg	11.22.19 21.22		1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.22.19 21.22	U	1
m,p-Xylenes	179601-23-1	**0.0123**	0.00396	mg/kg	11.22.19 21.22		1
o-Xylene	95-47-6	**0.00747**	0.00198	mg/kg	11.22.19 21.22		1
Total Xylenes	1330-20-7	**0.0198**	0.00198	mg/kg	11.22.19 21.22		1
Total BTEX		**0.0299**	0.00198	mg/kg	11.22.19 21.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	11.22.19 21.22	
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.22.19 21.22	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-018	Date Collected:	11.20.19 13.10	Sample Depth:	3.5 - 4.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.2**	4.96	mg/kg	11.22.19 16.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.23.19 04.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	**63.8**	50.0	mg/kg	11.23.19 04.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.23.19 04.05	U	1
Total TPH	PHC635	**63.8**	50.0	mg/kg	11.23.19 04.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	11.23.19 04.05	
o-Terphenyl	84-15-1	111	%	70-135	11.23.19 04.05	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-018	Date Collected:	11.20.19 13.10	Sample Depth:	3.5 - 4.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.22.19 21.42	U	1
Toluene	108-88-3	**0.00344**	0.00199	mg/kg	11.22.19 21.42		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.22.19 21.42	U	1
m,p-Xylenes	179601-23-1	**0.0103**	0.00398	mg/kg	11.22.19 21.42		1
o-Xylene	95-47-6	**0.0174**	0.00199	mg/kg	11.22.19 21.42		1
Total Xylenes	1330-20-7	**0.0277**	0.00199	mg/kg	11.22.19 21.42		1
Total BTEX		**0.0311**	0.00199	mg/kg	11.22.19 21.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	11.22.19 21.42	
4-Bromofluorobenzene	460-00-4	134	%	70-130	11.22.19 21.42	**

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F9**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-019	Date Collected:	11.20.19 13.15	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**74.6**	5.00	mg/kg	11.22.19 17.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**97.7**	49.9	mg/kg	11.23.19 04.24		1
Diesel Range Organics (DRO)	C10C28DRO	**543**	49.9	mg/kg	11.23.19 04.24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**68.8**	49.9	mg/kg	11.23.19 04.24		1
Total TPH	PHC635	**710**	49.9	mg/kg	11.23.19 04.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	11.23.19 04.24	
o-Terphenyl	84-15-1	127	%	70-135	11.23.19 04.24	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F9**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-019	Date Collected:	11.20.19 13.15	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0151**	0.00200	mg/kg	11.22.19 22.02		1
Toluene	108-88-3	**0.352**	0.00200	mg/kg	11.22.19 22.02		1
Ethylbenzene	100-41-4	**0.209**	0.00200	mg/kg	11.22.19 22.02		1
m,p-Xylenes	179601-23-1	**0.553**	0.00400	mg/kg	11.22.19 22.02		1
o-Xylene	95-47-6	**0.257**	0.00200	mg/kg	11.22.19 22.02		1
Total Xylenes	1330-20-7	**0.810**	0.00200	mg/kg	11.22.19 22.02		1
Total BTEX		**1.39**	0.00200	mg/kg	11.22.19 22.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	195	%	70-130	11.22.19 22.02	**
1,4-Difluorobenzene	540-36-3	131	%	70-130	11.22.19 22.02	**

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F2**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-020	Date Collected:	11.20.19 14.27	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.6**	4.98	mg/kg	11.22.19 17.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 15.00	Basis:	Wet Weight
Seq Number:	3108554				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.23.19 04.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.23.19 04.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.23.19 04.43	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.23.19 04.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	11.23.19 04.43	
o-Terphenyl	84-15-1	112	%	70-135	11.23.19 04.43	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F2**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-020	Date Collected:	11.20.19 14.27	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.00	Basis:	Wet Weight
Seq Number:	3108530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.22.19 22.22	U	1
Toluene	108-88-3	**0.00655**	0.00202	mg/kg	11.22.19 22.22		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.22.19 22.22	U	1
m,p-Xylenes	179601-23-1	**0.00869**	0.00403	mg/kg	11.22.19 22.22		1
o-Xylene	95-47-6	**0.00324**	0.00202	mg/kg	11.22.19 22.22		1
Total Xylenes	1330-20-7	**0.0119**	0.00202	mg/kg	11.22.19 22.22		1
Total BTEX		**0.0185**	0.00202	mg/kg	11.22.19 22.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	70-130	11.22.19 22.22	
1,4-Difluorobenzene	540-36-3	113	%	70-130	11.22.19 22.22	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F5**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-021	Date Collected:	11.20.19 14.30	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**281**	4.99	mg/kg	11.22.19 17.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.22.19 15.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**130**	50.0	mg/kg	11.22.19 15.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.22.19 15.12	U	1
Total TPH	PHC635	**130**	50.0	mg/kg	11.22.19 15.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	11.22.19 15.12	
o-Terphenyl	84-15-1	118	%	70-135	11.22.19 15.12	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F5**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-021	Date Collected:	11.20.19 14.30	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 15.52	U	1
Toluene	108-88-3	**0.00461**	0.00200	mg/kg	11.22.19 15.52		1
Ethylbenzene	100-41-4	**0.00502**	0.00200	mg/kg	11.22.19 15.52		1
m,p-Xylenes	179601-23-1	**0.0247**	0.00399	mg/kg	11.22.19 15.52		1
o-Xylene	95-47-6	**0.0112**	0.00200	mg/kg	11.22.19 15.52		1
Total Xylenes	1330-20-7	**0.0359**	0.00200	mg/kg	11.22.19 15.52		1
Total BTEX		**0.0455**	0.00200	mg/kg	11.22.19 15.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	70-130	11.22.19 15.52	
4-Bromofluorobenzene	460-00-4	122	%	70-130	11.22.19 15.52	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-022	Date Collected:	11.20.19 17.00	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**45.8**	5.03	mg/kg	11.22.19 17.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.22.19 15.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	**247**	49.9	mg/kg	11.22.19 15.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.22.19 15.30	U	1
Total TPH	PHC635	**247**	49.9	mg/kg	11.22.19 15.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	11.22.19 15.30	
o-Terphenyl	84-15-1	120	%	70-135	11.22.19 15.30	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-022	Date Collected:	11.20.19 17.00	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.22.19 16.13	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.22.19 16.13	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.22.19 16.13	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.22.19 16.13	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.22.19 16.13	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.22.19 16.13	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.22.19 16.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	11.22.19 16.13	
1,4-Difluorobenzene	540-36-3	90	%	70-130	11.22.19 16.13	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W1**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-023	Date Collected:	11.20.19 17.02	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.5**	4.96	mg/kg	11.22.19 17.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.22.19 15.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.22.19 15.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.22.19 15.49	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.22.19 15.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	11.22.19 15.49	
o-Terphenyl	84-15-1	114	%	70-135	11.22.19 15.49	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W1**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-023	Date Collected:	11.20.19 17.02	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 16.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.22.19 16.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.22.19 16.33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.22.19 16.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.22.19 16.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.22.19 16.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.22.19 16.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	11.22.19 16.33	
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.22.19 16.33	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W2**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-024	Date Collected:	11.20.19 17.04	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.20**	4.95	mg/kg	11.22.19 17.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.22.19 16.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	**66.9**	49.9	mg/kg	11.22.19 16.07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.22.19 16.07	U	1
Total TPH	PHC635	**66.9**	49.9	mg/kg	11.22.19 16.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	11.22.19 16.07	
o-Terphenyl	84-15-1	116	%	70-135	11.22.19 16.07	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W2**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-024	Date Collected:	11.20.19 17.04	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.22.19 16.53	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.22.19 16.53	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.22.19 16.53	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	11.22.19 16.53	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.22.19 16.53	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	11.22.19 16.53	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.22.19 16.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	11.22.19 16.53	
1,4-Difluorobenzene	540-36-3	111	%	70-130	11.22.19 16.53	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F10**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-025	Date Collected:	11.20.19 17.06	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.3**	4.95	mg/kg	11.22.19 17.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**136**	50.0	mg/kg	11.22.19 16.26		1
Diesel Range Organics (DRO)	C10C28DRO	**1120**	50.0	mg/kg	11.22.19 16.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**145**	50.0	mg/kg	11.22.19 16.26		1
Total TPH	PHC635	**1400**	50.0	mg/kg	11.22.19 16.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	129	%	70-135	11.22.19 16.26	
o-Terphenyl	84-15-1	128	%	70-135	11.22.19 16.26	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F10**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-025	Date Collected:	11.20.19 17.06	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 17.13	U	1
Toluene	108-88-3	**0.00497**	0.00200	mg/kg	11.22.19 17.13		1
Ethylbenzene	100-41-4	**0.0320**	0.00200	mg/kg	11.22.19 17.13		1
m,p-Xylenes	179601-23-1	**0.180**	0.00401	mg/kg	11.22.19 17.13		1
o-Xylene	95-47-6	**0.0957**	0.00200	mg/kg	11.22.19 17.13		1
Total Xylenes	1330-20-7	**0.276**	0.00200	mg/kg	11.22.19 17.13		1
Total BTEX		**0.313**	0.00200	mg/kg	11.22.19 17.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	85	%	70-130	11.22.19 17.13	
4-Bromofluorobenzene	460-00-4	193	%	70-130	11.22.19 17.13	**

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F1**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-026	Date Collected:	11.20.19 17.08	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**21.8**	4.99	mg/kg	11.22.19 18.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.22.19 16.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	**77.7**	49.9	mg/kg	11.22.19 16.45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.22.19 16.45	U	1
Total TPH	PHC635	**77.7**	49.9	mg/kg	11.22.19 16.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	11.22.19 16.45	
o-Terphenyl	84-15-1	112	%	70-135	11.22.19 16.45	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F1**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-026	Date Collected:	11.20.19 17.08	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 17.33	U	1
Toluene	108-88-3	**0.00253**	0.00200	mg/kg	11.22.19 17.33		1
Ethylbenzene	100-41-4	**0.00283**	0.00200	mg/kg	11.22.19 17.33		1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.22.19 17.33	U	1
o-Xylene	95-47-6	**0.00793**	0.00200	mg/kg	11.22.19 17.33		1
Total Xylenes	1330-20-7	**0.00793**	0.00200	mg/kg	11.22.19 17.33		1
Total BTEX		**0.0133**	0.00200	mg/kg	11.22.19 17.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.22.19 17.33	
1,4-Difluorobenzene	540-36-3	90	%	70-130	11.22.19 17.33	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F6**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-027	Date Collected:	11.20.19 17.10	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	11.22.19 18.24	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.22.19 17.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.22.19 17.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.22.19 17.22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.22.19 17.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	11.22.19 17.22	
o-Terphenyl	84-15-1	109	%	70-135	11.22.19 17.22	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F6**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-027	Date Collected:	11.20.19 17.10	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.22.19 17.53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.22.19 17.53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.22.19 17.53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.22.19 17.53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.22.19 17.53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.22.19 17.53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.22.19 17.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	11.22.19 17.53	
4-Bromofluorobenzene	460-00-4	100	%	70-130	11.22.19 17.53	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F6**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-028	Date Collected:	11.20.19 17.12	Sample Depth:	2.5 - 3.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	11.22.19 18.44	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.22.19 17.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.22.19 17.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.22.19 17.40	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.22.19 17.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	11.22.19 17.40	
o-Terphenyl	84-15-1	111	%	70-135	11.22.19 17.40	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F6**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-028	Date Collected:	11.20.19 17.12	Sample Depth:	2.5 - 3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.22.19 18.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.22.19 18.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.22.19 18.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	11.22.19 18.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	11.22.19 18.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	11.22.19 18.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.22.19 18.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	11.22.19 18.13	
1,4-Difluorobenzene	540-36-3	110	%	70-130	11.22.19 18.13	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F6**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-029	Date Collected:	11.20.19 17.14	Sample Depth:	3.5 - 4.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	11.22.19 18.51	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.22.19 17.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.22.19 17.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.22.19 17.59	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.22.19 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	11.22.19 17.59	
o-Terphenyl	84-15-1	105	%	70-135	11.22.19 17.59	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F6**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-029	Date Collected:	11.20.19 17.14	Sample Depth:	3.5 - 4.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.22.19 18.33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.22.19 18.33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.22.19 18.33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.22.19 18.33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.22.19 18.33	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.22.19 18.33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.22.19 18.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	11.22.19 18.33	
4-Bromofluorobenzene	460-00-4	91	%	70-130	11.22.19 18.33	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-030	Date Collected:	11.21.19 13.00	Sample Depth:	1.5 - 2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**94.9**	5.05	mg/kg	11.22.19 18.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**72.2**	49.9	mg/kg	11.22.19 18.18		1
Diesel Range Organics (DRO)	C10C28DRO	**379**	49.9	mg/kg	11.22.19 18.18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.22.19 18.18	U	1
Total TPH	PHC635	**451**	49.9	mg/kg	11.22.19 18.18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	11.22.19 18.18	
o-Terphenyl	84-15-1	124	%	70-135	11.22.19 18.18	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-030	Date Collected:	11.21.19 13.00	Sample Depth:	1.5 - 2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00219**	0.00200	mg/kg	11.22.19 18.54		1
Toluene	108-88-3	**0.145**	0.00200	mg/kg	11.22.19 18.54		1
Ethylbenzene	100-41-4	**0.173**	0.00200	mg/kg	11.22.19 18.54		1
m,p-Xylenes	179601-23-1	**0.787**	0.00400	mg/kg	11.22.19 18.54		1
o-Xylene	95-47-6	**0.385**	0.00200	mg/kg	11.22.19 18.54		1
Total Xylenes	1330-20-7	**1.17**	0.00200	mg/kg	11.22.19 18.54		1
Total BTEX		**1.49**	0.00200	mg/kg	11.22.19 18.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	11.22.19 18.54	
4-Bromofluorobenzene	460-00-4	633	%	70-130	11.22.19 18.54	**

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-031	Date Collected:	11.21.19 13.10	Sample Depth:	1.5 - 2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**77.8**	4.98	mg/kg	11.22.19 19.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**53.4**	50.0	mg/kg	11.22.19 18.37		1
Diesel Range Organics (DRO)	C10C28DRO	**202**	50.0	mg/kg	11.22.19 18.37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.22.19 18.37	U	1
Total TPH	PHC635	**255**	50.0	mg/kg	11.22.19 18.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	11.22.19 18.37	
o-Terphenyl	84-15-1	116	%	70-135	11.22.19 18.37	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W8**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-031	Date Collected:	11.21.19 13.10	Sample Depth:	1.5 - 2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0116**	0.00200	mg/kg	11.22.19 20.12		1
Toluene	108-88-3	**0.383**	0.00200	mg/kg	11.22.19 20.12		1
Ethylbenzene	100-41-4	**0.199**	0.00200	mg/kg	11.22.19 20.12		1
m,p-Xylenes	179601-23-1	**0.782**	0.00400	mg/kg	11.22.19 20.12		1
o-Xylene	95-47-6	**0.306**	0.00200	mg/kg	11.22.19 20.12		1
Total Xylenes	1330-20-7	**1.09**	0.00200	mg/kg	11.22.19 20.12		1
Total BTEX		**1.68**	0.00200	mg/kg	11.22.19 20.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	407	%	70-130	11.22.19 20.12	**
1,4-Difluorobenzene	540-36-3	94	%	70-130	11.22.19 20.12	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F10**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-032	Date Collected:	11.21.19 13.20	Sample Depth:	1.5 - 2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.4**	4.96	mg/kg	11.22.19 19.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.22.19 18.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**125**	49.9	mg/kg	11.22.19 18.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.22.19 18.55	U	1
Total TPH	PHC635	**125**	49.9	mg/kg	11.22.19 18.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	11.22.19 18.55	
o-Terphenyl	84-15-1	114	%	70-135	11.22.19 18.55	

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Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-F10**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-032	Date Collected:	11.21.19 13.20	Sample Depth:	1.5 - 2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.22.19 20.33	U	1
Toluene	108-88-3	**0.00662**	0.00202	mg/kg	11.22.19 20.33		1
Ethylbenzene	100-41-4	**0.0108**	0.00202	mg/kg	11.22.19 20.33		1
m,p-Xylenes	179601-23-1	**0.0224**	0.00403	mg/kg	11.22.19 20.33		1
o-Xylene	95-47-6	**0.0199**	0.00202	mg/kg	11.22.19 20.33		1
Total Xylenes	1330-20-7	**0.0423**	0.00202	mg/kg	11.22.19 20.33		1
Total BTEX		**0.0597**	0.00202	mg/kg	11.22.19 20.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	130	%	70-130	11.22.19 20.33	
1,4-Difluorobenzene	540-36-3	80	%	70-130	11.22.19 20.33	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W3**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-033	Date Collected:	11.21.19 14.30	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	11.22.19 19.17	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.22.19 19.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	**83.0**	49.8	mg/kg	11.22.19 19.14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.22.19 19.14	U	1
Total TPH	PHC635	**83.0**	49.8	mg/kg	11.22.19 19.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	11.22.19 19.14	
o-Terphenyl	84-15-1	112	%	70-135	11.22.19 19.14	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W3**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-033	Date Collected:	11.21.19 14.30	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 20.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.22.19 20.53	U	1
Ethylbenzene	100-41-4	**0.00298**	0.00200	mg/kg	11.22.19 20.53		1
m,p-Xylenes	179601-23-1	**0.00795**	0.00401	mg/kg	11.22.19 20.53		1
o-Xylene	95-47-6	**0.00464**	0.00200	mg/kg	11.22.19 20.53		1
Total Xylenes	1330-20-7	**0.0126**	0.00200	mg/kg	11.22.19 20.53		1
Total BTEX		**0.0156**	0.00200	mg/kg	11.22.19 20.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.22.19 20.53	
4-Bromofluorobenzene	460-00-4	121	%	70-130	11.22.19 20.53	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-034	Date Collected:	11.21.19 14.35	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.30	Basis:	Wet Weight
Seq Number:	3108492				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.70**	5.00	mg/kg	11.22.19 19.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.22.19 19.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**63.7**	50.0	mg/kg	11.22.19 19.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.22.19 19.34	U	1
Total TPH	PHC635	**63.7**	50.0	mg/kg	11.22.19 19.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	11.22.19 19.34	
o-Terphenyl	84-15-1	110	%	70-135	11.22.19 19.34	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W4**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-034	Date Collected:	11.21.19 14.35	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.22.19 21.13	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.22.19 21.13	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.22.19 21.13	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.22.19 21.13	U	1
o-Xylene	95-47-6	**0.00202**	0.00198	mg/kg	11.22.19 21.13		1
Total Xylenes	1330-20-7	**0.00202**	0.00198	mg/kg	11.22.19 21.13		1
Total BTEX		**0.00202**	0.00198	mg/kg	11.22.19 21.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	11.22.19 21.13	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.22.19 21.13	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W5**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-035	Date Collected:	11.21.19 14.40	Sample Depth:	0.0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.22.19 15.45	Basis:	Wet Weight
Seq Number:	3108493				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.7**	4.96	mg/kg	11.22.19 20.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.22.19 11.00	Basis:	Wet Weight
Seq Number:	3108553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.22.19 19.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**119**	50.0	mg/kg	11.22.19 19.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.22.19 19.53	U	1
Total TPH	PHC635	**119**	50.0	mg/kg	11.22.19 19.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	11.22.19 19.53	
o-Terphenyl	84-15-1	111	%	70-135	11.22.19 19.53	

Certificate of Analytical Results 644192

Earth Systems Response and Restoration, Odessa, TX

Poker Lake Unit #387H Heater Treater Release

Sample Id:	**CS-W5**	Matrix:	Soil	Date Received:	11.22.19 10.56
Lab Sample Id:	644192-035	Date Collected:	11.21.19 14.40	Sample Depth:	0.0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.22.19 12.20	Basis:	Wet Weight
Seq Number:	3108542				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 21.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.22.19 21.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.22.19 21.33	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.22.19 21.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.22.19 21.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.22.19 21.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.22.19 21.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	11.22.19 21.33	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.22.19 21.33	

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

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 644192

Earth Systems Response and Restoration

Poker Lake Unit #387H Heater Treater Release

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108490 — Matrix: Solid — Date Prep: 11.22.19
MB Sample Id: 7691011-1-BLK — LCS Sample Id: 7691011-1-BKS — LCSD Sample Id: 7691011-1-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	244	98	244	98	90-110	0	20	mg/kg	11.22.19 12:32	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108491 — Matrix: Solid — Date Prep: 11.22.19
MB Sample Id: 7691013-1-BLK — LCS Sample Id: 7691013-1-BKS — LCSD Sample Id: 7691013-1-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	244	98	246	98	90-110	1	20	mg/kg	11.22.19 16:18	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108492 — Matrix: Solid — Date Prep: 11.22.19
MB Sample Id: 7691015-1-BLK — LCS Sample Id: 7691015-1-BKS — LCSD Sample Id: 7691015-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	241	96	243	97	90-110	1	20	mg/kg	11.22.19 16:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108493 — Matrix: Solid — Date Prep: 11.22.19
MB Sample Id: 7691016-1-BLK — LCS Sample Id: 7691016-1-BKS — LCSD Sample Id: 7691016-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	240	96	240	96	90-110	0	20	mg/kg	11.22.19 19:50	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108490 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644053-002 — MS Sample Id: 644053-002 S — MSD Sample Id: 644053-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	57.2	248	268	85	263	83	90-110	2	20	mg/kg	11.22.19 14:03	X

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

QC Summary 644192

Earth Systems Response and Restoration

Poker Lake Unit #387H Heater Treater Release

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108490 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644192-001 — MS Sample Id: 644192-001 S — MSD Sample Id: 644192-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	26.7	251	277	100	276	99	90-110	0	20	mg/kg	11.22.19 18:58	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108491 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644142-004 — MS Sample Id: 644142-004 S — MSD Sample Id: 644142-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	207	252	443	94	448	96	90-110	1	20	mg/kg	11.22.19 17:48	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108491 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644192-010 — MS Sample Id: 644192-010 S — MSD Sample Id: 644192-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	62.6	251	315	101	313	100	90-110	1	20	mg/kg	11.22.19 16:34	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108492 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644192-015 — MS Sample Id: 644192-015 S — MSD Sample Id: 644192-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.88	253	268	104	268	104	90-110	0	20	mg/kg	11.22.19 16:31	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108492 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644192-025 — MS Sample Id: 644192-025 S — MSD Sample Id: 644192-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	59.3	248	317	104	316	104	90-110	0	20	mg/kg	11.22.19 18:04	

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

QC Summary 644192

Earth Systems Response and Restoration

Poker Lake Unit #387H Heater Treater Release

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108493 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644192-035 — MS Sample Id: 644192-035 S — MSD Sample Id: 644192-035 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.7	248	263	100	261	99	90-110	1	20	mg/kg	11.22.19 20:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108493 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644197-012 — MS Sample Id: 644197-012 S — MSD Sample Id: 644197-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	377	250	612	94	612	94	90-110	0	20	mg/kg	11.22.19 21:43	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3108553 — Matrix: Solid — Date Prep: 11.22.19
MB Sample Id: 7691075-1-BLK — LCS Sample Id: 7691075-1-BKS — LCSD Sample Id: 7691075-1-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	1080	108	1100	110	70-135	2	20	mg/kg	11.22.19 12:43	
Diesel Range Organics (DRO)	<15.0	1000	1020	102	1050	105	70-135	3	20	mg/kg	11.22.19 12:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		126		128		70-135	%	11.22.19 12:43
o-Terphenyl	104		111		119		70-135	%	11.22.19 12:43

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3108554 — Matrix: Solid — Date Prep: 11.22.19
MB Sample Id: 7691079-1-BLK — LCS Sample Id: 7691079-1-BKS — LCSD Sample Id: 7691079-1-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	1140	114	1100	110	70-135	4	20	mg/kg	11.22.19 21:09	
Diesel Range Organics (DRO)	<15.0	1000	1080	108	1040	104	70-135	4	20	mg/kg	11.22.19 21:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		120		121		70-135	%	11.22.19 21:09
o-Terphenyl	105		113		112		70-135	%	11.22.19 21:09

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

QC Summary 644192

Earth Systems Response and Restoration

Poker Lake Unit #387H Heater Treater Release

Analytical Method: TPH by SW8015 Mod
Seq Number: 3108553
Prep Method: SW8015P
Date Prep: 11.22.19
Matrix: Solid
MB Sample Id: 7691075-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.22.19 12:24	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3108554
Prep Method: SW8015P
Date Prep: 11.22.19
Matrix: Solid
MB Sample Id: 7691079-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.22.19 20:50	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3108553
Prep Method: SW8015P
Date Prep: 11.22.19
Parent Sample Id: 644017-001
Matrix: Soil
MS Sample Id: 644017-001 S
MSD Sample Id: 644017-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1190	119	1220	122	70-135	2	20	mg/kg	11.22.19 13:39	
Diesel Range Organics (DRO)	<15.0	997	1190	119	1190	119	70-135	0	20	mg/kg	11.22.19 13:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		130		70-135	%	11.22.19 13:39
o-Terphenyl	115		127		70-135	%	11.22.19 13:39

Analytical Method: TPH by SW8015 Mod
Seq Number: 3108554
Prep Method: SW8015P
Date Prep: 11.22.19
Parent Sample Id: 644192-001
Matrix: Soil
MS Sample Id: 644192-001 S
MSD Sample Id: 644192-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	67.7	997	1270	121	1280	121	70-135	1	20	mg/kg	11.22.19 22:05	
Diesel Range Organics (DRO)	453	997	1480	103	1480	103	70-135	0	20	mg/kg	11.22.19 22:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		128		70-135	%	11.22.19 22:05
o-Terphenyl	122		126		70-135	%	11.22.19 22:05

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

QC Summary 644192

Earth Systems Response and Restoration

Poker Lake Unit #387H Heater Treater Release

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3108530 — Matrix: Solid — Date Prep: 11.22.19
MB Sample Id: 7690964-1-BLK — LCS Sample Id: 7690964-1-BKS — LCSD Sample Id: 7690964-1-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	0.110	110	0.120	120	70-130	9	35	mg/kg	11.22.19 13:02	
Toluene	<0.00200	0.100	0.106	106	0.114	114	70-130	7	35	mg/kg	11.22.19 13:02	
Ethylbenzene	<0.00200	0.100	0.111	111	0.118	118	70-130	6	35	mg/kg	11.22.19 13:02	
m,p-Xylenes	<0.00400	0.200	0.232	116	0.245	123	70-130	5	35	mg/kg	11.22.19 13:02	
o-Xylene	<0.00200	0.100	0.114	114	0.121	121	70-130	6	35	mg/kg	11.22.19 13:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		113		70-130	%	11.22.19 13:02
4-Bromofluorobenzene	105		110		116		70-130	%	11.22.19 13:02

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3108542 — Matrix: Solid — Date Prep: 11.22.19
MB Sample Id: 7690967-1-BLK — LCS Sample Id: 7690967-1-BKS — LCSD Sample Id: 7690967-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.104	104	0.104	104	70-130	0	35	mg/kg	11.22.19 13:53	
Toluene	<0.000456	0.100	0.100	100	0.101	101	70-130	1	35	mg/kg	11.22.19 13:53	
Ethylbenzene	<0.000565	0.100	0.0980	98	0.0979	98	70-130	0	35	mg/kg	11.22.19 13:53	
m,p-Xylenes	<0.00101	0.200	0.200	100	0.199	100	70-130	1	35	mg/kg	11.22.19 13:53	
o-Xylene	<0.000344	0.100	0.0975	98	0.0988	99	70-130	1	35	mg/kg	11.22.19 13:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		100		70-130	%	11.22.19 13:53
4-Bromofluorobenzene	92		92		101		70-130	%	11.22.19 13:53

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3108556 — Matrix: Solid — Date Prep: 11.23.19
MB Sample Id: 7691100-1-BLK — LCS Sample Id: 7691100-1-BKS — LCSD Sample Id: 7691100-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.115	115	70-130	7	35	mg/kg	11.23.19 21:20	
Toluene	<0.00200	0.100	0.100	100	0.107	107	70-130	7	35	mg/kg	11.23.19 21:20	
Ethylbenzene	<0.00200	0.100	0.103	103	0.110	110	70-130	7	35	mg/kg	11.23.19 21:20	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.225	113	70-130	7	35	mg/kg	11.23.19 21:20	
o-Xylene	<0.00200	0.100	0.104	104	0.111	111	70-130	7	35	mg/kg	11.23.19 21:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		110		111		70-130	%	11.23.19 21:20
4-Bromofluorobenzene	97		102		102		70-130	%	11.23.19 21:20

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

QC Summary 644192

Earth Systems Response and Restoration

Poker Lake Unit #387H Heater Treater Release

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3108530 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644192-001 — MS Sample Id: 644192-001 S — MSD Sample Id: 644192-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.134	135	0.120	119	70-130	11	35	mg/kg	11.22.19 13:43	X
Toluene	0.0864	0.0992	0.184	98	0.144	57	70-130	24	35	mg/kg	11.22.19 13:43	X
Ethylbenzene	0.124	0.0992	0.186	63	0.148	24	70-130	23	35	mg/kg	11.22.19 13:43	X
m,p-Xylenes	0.398	0.198	0.495	49	0.345	0	70-130	36	35	mg/kg	11.22.19 13:43	XF
o-Xylene	0.177	0.0992	0.230	53	0.171	0	70-130	29	35	mg/kg	11.22.19 13:43	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		113		70-130	%	11.22.19 13:43
4-Bromofluorobenzene	162	**	145	**	70-130	%	11.22.19 13:43

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3108542 — Matrix: Soil — Date Prep: 11.22.19
Parent Sample Id: 644192-021 — MS Sample Id: 644192-021 S — MSD Sample Id: 644192-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000449	0.101	0.0976	96	0.0984	97	70-130	1	35	mg/kg	11.22.19 14:33	
Toluene	0.00461	0.101	0.109	103	0.106	100	70-130	3	35	mg/kg	11.22.19 14:33	
Ethylbenzene	0.00502	0.101	0.101	95	0.0913	85	70-130	10	35	mg/kg	11.22.19 14:33	
m,p-Xylenes	0.0247	0.202	0.214	94	0.199	86	70-130	7	35	mg/kg	11.22.19 14:33	
o-Xylene	0.0112	0.101	0.107	95	0.107	95	70-130	0	35	mg/kg	11.22.19 14:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		89		70-130	%	11.22.19 14:33
4-Bromofluorobenzene	115		125		70-130	%	11.22.19 14:33

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3108556 — Matrix: Soil — Date Prep: 11.23.19
Parent Sample Id: 644209-001 — MS Sample Id: 644209-001 S — MSD Sample Id: 644209-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0941	94	0.0990	99	70-130	5	35	mg/kg	11.23.19 22:00	
Toluene	<0.00200	0.0998	0.0878	88	0.0932	93	70-130	6	35	mg/kg	11.23.19 22:00	
Ethylbenzene	<0.00200	0.0998	0.0883	88	0.0942	94	70-130	6	35	mg/kg	11.23.19 22:00	
m,p-Xylenes	<0.00399	0.200	0.180	90	0.193	97	70-130	7	35	mg/kg	11.23.19 22:00	
o-Xylene	<0.00200	0.0998	0.0897	90	0.0958	96	70-130	7	35	mg/kg	11.23.19 22:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		114		70-130	%	11.23.19 22:00
4-Bromofluorobenzene	108		113		70-130	%	11.23.19 22:00

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

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 644192

Report Email Distribution: Adrian_Baker@xtoenergy.com, kwilliams@earthsys.net

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Project Manager:	John Fergerson	Bill to: (if different)	Adrian Baker
Company Name:	Earth Systems	Company Name:	XTO Energy Inc
Address:	4115 SCR 1297	Address:	6401 Holiday Hill Road, Bldg 5
City, State ZIP:	Odessa, TX 79765	City, State ZIP:	Midland, Texas 79707
Phone:	(432) 638-7333	Email:	jfergerson@earthsys.net

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfield ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/US ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Poker Lake Unit #387H Heater Treater Release	Turn Around	
Project Number:	0169	Routine:	☒
Project Location	Eddy County, New Mexico	Rush:	☐
Sampler's Name:	Mason Jones	Due Date:	
PO #:			

SAMPLE RECEIPT				
Temperature (°C):	0.4	Temp Blank:	Yes (No)	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:		
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride (EPA 300.0	TPH (GRO/DRO/MRO (8015M))	BTEX (8021B)
CS-W7	Soil	11/20/19	0920	0.5-1.0'	1	X	X	X
CS-F12	Soil	11/20/19	0924	1.0-1.5'	1	X	X	X
CS-F12	Soil	11/20/19	0925	2.5-3.0'	1	X	X	X
CS-F-12	Soil	11/20/19	0926	3.5-4.0'	1	X	X	X
CS-F11	Soil	11/20/19	0935	0.5-1.0'	1	X	X	X
CS-F11	Soil	11/20/19	0936	2.5-3.0'	1	X	X	X
CS-F11	Soil	11/20/19	0937	3.5-4.0'	1	X	X	X
CS-W6	Soil	11/20/19	0940	0.5-1.0'	1	X	X	X
CS-F7	Soil	11/20/19	0945	0.5-1.0'	1	X	X	X
CS-F4	Soil	11/20/19	0955	0.5-1.0'	1	X	X	X

Preservative Codes

HNO3: HN
H2S04: H2
HCL: HL
None: NO
NaOH: Na
MeOH: Me
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Mason Jones		11-22-19 9:58	2		11/22/19 1054
3			4		
5			6		

Revised Date101419 Rev. 2019.1

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 644192

Report Email Distribution: Adrian_Baker@xtoenergy.com, kwilliams@earthsys.net

www.xenco.com Page 2 of 4

Project Manager:	John Fergerson	Bill to: (if different)	Adrian Baker
Company Name:	Earth Systems	Company Name:	XTO Energy Inc
Address:	4115 SCR 1297	Address:	6401 Holiday Hill Road, Bldg 5
City, State ZIP:	Odessa, TX 79765	City, State ZIP:	Midland, Texas 79707
Phone:	(432) 638-7333 Email:	jfergerson@earthsys.net	

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfield ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level I ☐ Level II ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Poker Lake Unit #387H Heater Treater Release	Turn Around	
Project Number:	0169	Routine:	☒
Project Location	Eddy County, New Mexico	Rush:	☐
Sampler's Name:	Mason Jones	Due Date:	
PO #:			

SAMPLE RECEIPT					
Temp Blank:	Yes No	Wet Ice:	Yes No		
Temperature (°C):	0.1/0.4	Thermometer ID			
Received Intact:	Yes No				
Cooler Custody Seals:	Yes No N/A	Correction Factor:			
Sample Custody Seals:	Yes No N/A	Total Containers:			

Preservative Codes

HNO3: HN
H2S04: H2
HCL: HL
None: NO
NaOH: Na
MeOH: Me
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride (EPA 300.0	TPH (GRO/DRO/MRO (8015M))	BTEX (8021B)	Sample Comments
CS-F4	Soil	11/20/19	0957	2.5-3.0'	1	X	X	X	
CS-F4	Soil	11/20/19	0958	3.5-4.0;	1	X	X	X	
CS-F3	Soil	11/20/19	1000	0.5-1.0'	1	X	X	X	
CS-F3	Soil	11/20/19	1002	2.5-3.0'	1	X	X	X	
CS-F3	Soil	11/20/19	1004	3.5-4.0'	1	X	X	X	
CS-F8	Soil	11/20/19	1306	0.5-1.0'	1	X	X	X	
CS-F8	Soil	11/20/19	1308	2.5-3.0'	1	X	X	X	
CS-F8	Soil	11/20/19	1310	3.5-4.0'	1	X	X	X	
CS-F9	Soil	11/20/19	1315	0.5-1.0'	1	X	X	X	
CS-F2	Soil	11/20/19	1427	0.5-1.0'	1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Mason Jones		11-22-19 9:38	2		11/22/19 656
3			4		
5			6		

Revised Date101419 Rev. 2019.1

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
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Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 644192

Report Email Distribution: Adrian_Baker@xtoenergy.com, kwilliams@earthsys.net

www.xenco.com Page 3 of 4

Project Manager:	John Fergerson	Bill to: (if different)	Adrian Baker
Company Name:	Earth Systems	Company Name:	XTO Energy Inc
Address:	4115 SCR 1297	Address:	6401 Holiday Hill Road, Bldg 5
City, State ZIP:	Odessa, TX 79765	City, State ZIP:	Midland, Texas 79707
Phone:	(432) 638-7333	Email:	jfergerson@earthsys.net

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfield ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level I ☐ Level ☐ PST/US ☐ TRP ☐ Level ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Poker Lake Unit #387H Heater Treater Release	Turn Around	
Project Number:	0169	Routine:	☒
Project Location	Eddy County, New Mexico	Rush:	☐
Sampler's Name:	Mason Jones	Due Date:	
PO #:			

SAMPLE RECEIPT					
Temp Blank:	Yes No	Wet Ice:	Yes No		
Temperature (°C):	0.6/0.4	Thermometer ID			
Received Intact:	Yes No				
Cooler Custody Seals:	Yes No N/A	Correction Factor:			
Sample Custody Seals:	Yes No N/A	Total Containers:			

Preservative Codes

HNO3: HN
H2S04: H2
HCL: HL
None: NO
NaOH: Na
MeOH: Me
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride (EPA 300.0	TPH (GRO/DRO/MRO (8015M))	BTEX (8021B)	Sample Comments
CS-F5	Soil	11/20/19	1430	0.5-1.0'	1	X	X	X	
CS-W8	Soil	11/20/19	1700	0.5-1.0'	1	X	X	X	
CS-W1	Soil	11/20/19	1702	0.5-1.0'	1	X	X	X	
CS-W2	Soil	11/20/19	1704	0.5-1.0'	1	X	X	X	
CS-F10	Soil	11/20/19	1706	0.5-1.0'	1	X	X	X	
CS-F1	Soil	11/20/19	1708	0.5-1.0'	1	X	X	X	
CS-F6	Soil	11/20/19	1710	0.5-1.0'	1	X	X	X	
CS-F6	Soil	11/20/19	1712	2.5-3.0'	1	X	X	X	
CS-F6	Soil	11/20/19	1714	3.5-4.0'	1	X	X	X	
CS-F4	SOIL	11/21/19	1300	1.5-2.0'	1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Mason Jones		11.22.19 9:58	2		
3				4		
5				6		

Revised Date101419 Rev. 2019.1

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 614192

Report Email Distribution: Adrian_Baker@xtoenergy.com, kwilliams@earthsys.net

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Project Manager:	John Fergerson	Bill to: (if different)	Adrian Baker
Company Name:	Earth Systems	Company Name:	XTO Energy Inc
Address:	4115 SCR 1297	Address:	6401 Holiday Hill Road, Bldg 5
City, State ZIP:	Odessa, TX 79765	City, State ZIP:	Midland, Texas 79707
Phone:	(432) 638-7333	Email:	jfergerson@earthsys.net

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfield ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level I ☐ Level II ☐ PST/USTR ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Poker Lake Unit #387H Heater Treater Release	Turn Around	
Project Number:	0169	Routine:	☒
Project Location	Eddy County, New Mexico	Rush:	☐
Sampler's Name:	Mason Jones	Due Date:	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	0.6/0.4	Thermometer ID		
Received Intact:	Yes No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Total Containers:		

Preservative Codes

HNO3: HN
H2S04: H2
HCL: HL
None: NO
NaOH: Na
MeOH: Me
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride (EPA 300.0	TPH (GRO/DRO/MRO (8015M))	BTEX (8021B)	Sample Comments
CS-F8	Soil	11/21/19	1310	1.5-2.0'	1	X	X	X	
CS-F10	Soil	11/21/19	1320	1.5-2.0'	1	X	X	X	
CS-W3	Soil	11/21/19	1430	0.0-0.5'	1	X	X	X	
CS-W4	Soil	11/21/19	1435	0.0-0.5'	1	X	X	X	
CS-W5	Soil	11/21/19	1440	0.0-0.5'	1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Mason Jones		11.22.19 9:38	2		BTW	11/22 1654
3				4			
5				6			

Revised Date101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Earth Systems Response and Restoratic

Date/ Time Received: 11/22/2019 10:56:00 AM

Work Order #: 644192

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 11/22/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 11/22/2019
Jessica Kramer