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

State of New Mexico
Energy Minerals and Natural Resources

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

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 13 2017
RECEIVED

Form C-141
Revised August 8, 2011
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1710735309

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company WPX Energy Inc/RKI 246289	Contact Karolina Blaney
Address 5315 Buena Vista Dr.	Telephone No. 970 589 0743
Facility Name: RDU 57	Facility Type: Well Pad

Surface Owner: Federal	Mineral Owner: Federal	API No. 30- 015-41978

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	27	26S	30E	1650	FSL	1650	FWL	Eddy

Latitude: 32.01284N **Longitude**: 103.87202W

NATURE OF RELEASE

Type of Release. Produced Water and Oil	Volume of Release: 5 Bbls	Volume Recovered: 3 Bbls
Source of Release Flowline	Date and Hour of Occurrence 4/2/2017	Date and Hour of Discovery 4/2/2017 – 9:30 hrs MT
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? NMOCD Crystal Weaver & Michael Bratcher, BLM Shelly Tucker	
By Whom? Karolina Blaney	Date and Hour: 4/2/17– 3:03 hrs MT	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* N/A

Describe Cause of Problem and Remedial Action Taken.*

The spill was caused by equipment failure; corroded flowline. Approximately 5 bbls of oil and water was spilled off location with 3 bbls recovered from the impacted area. The spill occurred north of the RDU 57 well pad and migrated ~30-40'west of the access road.

Describe Area Affected and Cleanup Action Taken.*

The impacted area was mapped with a Trimble. With BLM's permission, the impacted soil was excavated and will be hauled off for disposal. The impacted area was sampled for BTEX, TPH, and chlorides in accordance with NM OCD Guidelines for Remediation of Leaks, Spills, and Releases. Further remediation will be based on these results.

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

Signature: Karolina Blaney	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Crystal Weaver
Printed Name: Karolina Blaney	
Title: Environmental Specialist	Approval Date: 4/17/17 Expiration Date: N/A
E-mail Address: Karolina.blaney@wpxenergy.com	Conditions of Approval: see attachment Attached ☒
Date: 4-13-17 Phone: 970-589-0743	

* Attach Additional Sheets If Necessary

2RP-4171

Incident ID	nAB1710735309
District RP	2RP-4171
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	nAB1710735309
District RP	2RP-4171
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: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 10/04/2021

email: jim.raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAB1710735309
District RP	2RP-4171
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: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 10/04/2021

email: jim.raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: OCD Date: 10/04/2021

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: Ashley Maxwell Date: 9/14/2022

Printed Name: Ashley Maxwell Title: Environmental Specialist

WSP USA
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

September 29, 2021

District II
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

RE: Closure Request
Ross Draw Unit 57
Incident Number nAB1710735309
Eddy County, New Mexico

To Whom it May Concern:

WSP USA Inc. (WSP), on behalf of WPX Energy, Inc. (WPX), is pleased to present the following Closure Request detailing site assessment, soil sampling, and excavation activities at the Ross Draw Unit 57 (Site) in Unit K, Section 27, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil following a release of produced water and oil at the Site. Based on the excavation activities and results of the soil sampling events, WPX is submitting this Closure Request, describing remediation that has occurred and requesting no further action (NFA) for Incident Number nAB1710735309.

RELEASE BACKGROUND

On April 2, 2017, corrosion of a flowline resulted in the release of 5 barrels (bbls) of produced water and crude oil into the adjacent pasture area. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 3 bbls of fluids were recovered. WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Form C-141 on April 13, 2017 and was assigned Incident Number nAB1710735309. WPX personnel visited the Site shortly after the release to evaluate the extent and conduct site assessment activities. The release extent was mapped using a handheld Global Positioning System (GPS) unit, which is depicted on Figure 2. Based on visual staining and location of release, remediation activities appeared warranted.

SITE CHARACTERIZATION

WSP 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 is estimated to be greater than 100 feet below ground surface (bgs) based a soil boring drilled by WPX on December 9, 2020, located approximately 0.16 miles south of the Site. Using a truck mounted drill rig equipped with air rotary, the soil boring

was advanced to a total depth of approximately 110 feet bgs. Groundwater was not observed within the soil boring after at least 72 hours. Following the observation period, the boring was properly plugged and abandoned. All wells used for depth to groundwater determination are depicted on Figure 1. The referenced well record is included as Attachment 1.

The closest continuously flowing or significant watercourse to the Site is a stream/river, located approximately 1,150 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

CLOSURE CRITERIA

Based on the results 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
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

A reclamation closure criteria of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture area impacted by the release, per NMAC 19.15.29.13.D (1) for areas that will be reclaimed immediately following remediation.

INTIAL EXCAVATION ACTIVITIES

On July 14, 2017, following access approval from the Bureau of Land Management (BLM), WPX personnel visited the Site to conduct initial excavation activities within the affected pasture area directed by surface staining. One soil sample was collected from the initial excavation at approximately 2 feet bgs. Based on the elevated chloride field screening for the soil sample, further remediation activities appeared warranted. Photographic documentation of excavation activities is included in Attachment 2.

DELINEATION SOIL SAMPLING ACTIVITIES

On June 26, 2019, WSP personnel advanced four delineation boreholes via hand auger within and around the release extent in order to define the extent of vertical and lateral impacts. Borehole BH01 was advanced in the current excavation to depths ranging from 3 feet to 6 feet bgs. WSP collected two discrete soil samples from the BH01 location; one at 4 feet bgs in accordance with the vertical clean boundary and the other at the borehole terminus, located at 6 feet bgs. Boreholes BH02 through BH04 were advanced in other areas within and around the release extent to verify the presence or absence of impacted soil. WSP collected two discrete soil samples from the other borehole locations; one at 2 feet bgs in accordance with the highest field screening the other at 4 feet bgs at the borehole terminus. Soil from the boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing PID and Hach® chloride QuanTab® test strips, respectively. The delineation soil samples were placed directly into a pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C), under strict chain-of-custody (COC) procedures, to Eurofins, LLC. (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency EPA Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Attachment 3. The delineation soil sample locations are depicted on Figure 2.

EXCAVATION SOIL SAMPLING ACTIVITIES

On June 15, 2021, WSP returned to the Site to oversee the excavation of residual impacted soil from the release area as indicated by field screening. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride as described above.

Following removal of impacted soil, WSP collected 5-point composite soil samples to represent at most 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW03 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. Composite soil samples FS01 through FS03 were collected from the floor of the excavation at 4 feet bgs. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3. Photographic documentation is included in Attachment 2.

The excavation area totaled approximately 600 square feet. A total of approximately 100 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Orla, Texas under WPX approved

manifests. After completion of confirmation sampling, the excavation areas were secured with fencing.

SOIL ANALYTICAL RESULTS

Laboratory analytical results for all delineation samples indicated concentrations of benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride are compliant with reclamation and/or Closure Criteria. A minimum removal of 4 feet of soil was required in the pasture area in the vicinity of borehole BH01. Lateral delineation was achieved based on analytical results associated with BH01 through BH04.

Laboratory analytical results for excavation sidewall samples SW01 through SW03, and floor samples FS01 through FS03 yielded concentrations of benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride compliant with the reclamation and/or Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Attachment 4. Based on laboratory analytical results, residual impacts have been excavated.

CLOSURE REQUEST

Site assessment, delineation, and excavation activities were conducted at the Site to address the April 2, 2017 release of produced water and crude oil. Laboratory analytical results for excavation soil samples, collected from the final excavation extent, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the soil sample analytical results, no further remediation appears required. WSP will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. The disturbed pasture area will be re-seeded with an approved BLM seed mixture.

Depth to groundwater has been determined to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. WSP and WPX believe these remedial actions are protective of human health, the environment, and groundwater. As such, WPX respectfully requests NFA for Incident Number nAB1710735309.

If you have any questions or comments, please do not hesitate to contact Mr. Dan Moir at (303) 887-2946.

Sincerely,

WSP USA Inc.

Anna Byers
Consultant, Geologist

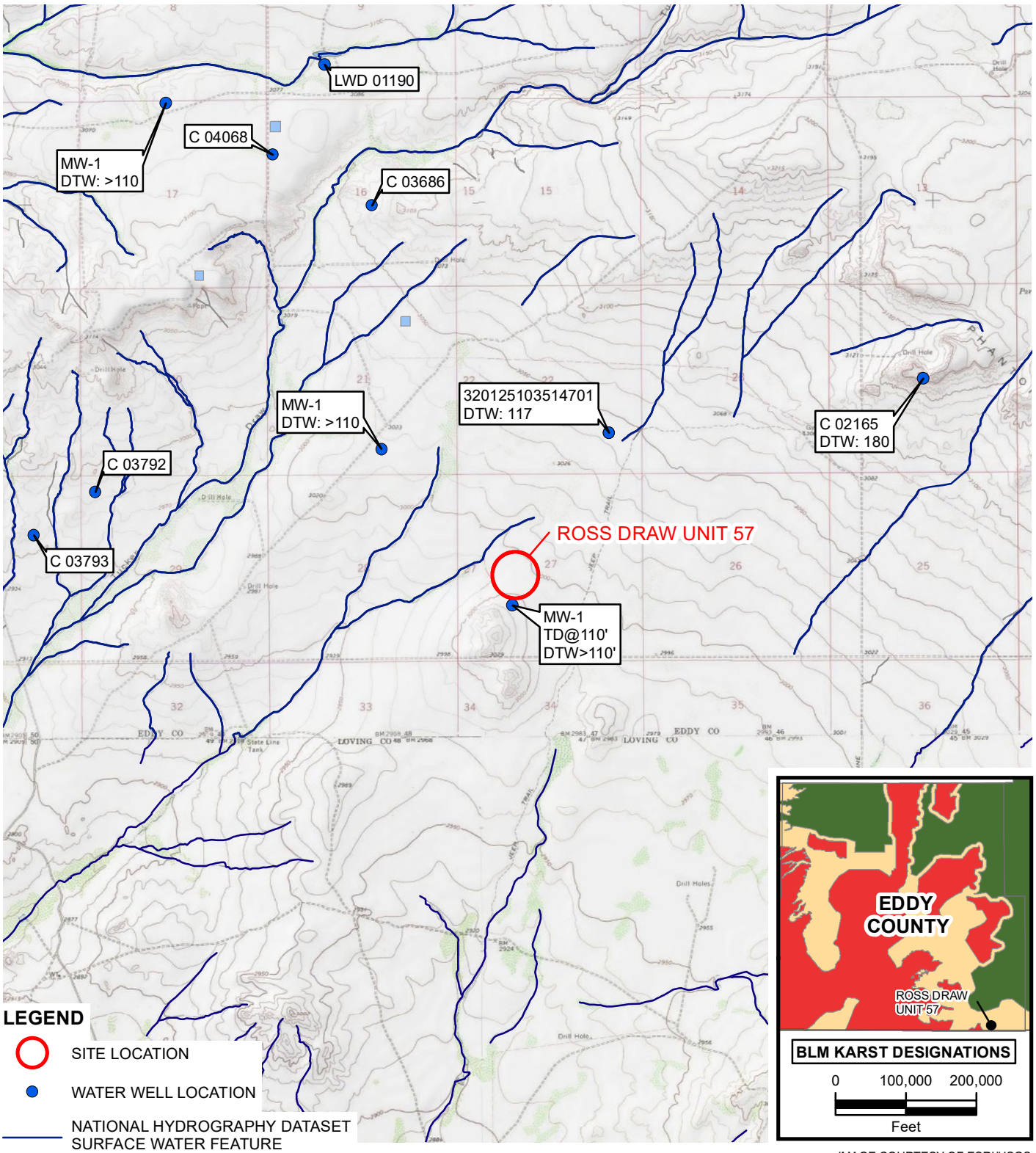
Daniel R. Moir, P.G.
Lead Consultant, Geologist

cc: Jim Raley, Devon
BLM
NMOCD

Attachments:

Figure 1	Site Location Map
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Referenced Well Records
Attachment 2	Photographic Log
Attachment 3	Lithologic/Sampling Log
Attachment 4	Laboratory Analytical Reports

FIGURES



DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT
TD: TOTAL DEPTH IN FEET
NOTE: INCIDENT NUMBER nAB1710735309

FIGURE 1
SITE LOCATION MAP
ROSS DRAW UNIT 57
UNIT K SEC 27 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX-Devon\GIS\MXD\034821011_RDU 57\034821011_FIG01_SL_RECEPTOR_2021.mxd

LEGEND

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS LINE
- RELEASE EXTENT

NOTE: INCIDENT NUMBER nAB1710735309
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

IMAGE COURTESY OF ESRI

0 30 60
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
ROSS DRAW UNIT 57
UNIT K SEC 27 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX-Devon\GIS\MXD\034821011_RDU 57\034821011_FIG02_DELINEATION_2021.mxd

LEGEND

- RELEASE LOCATION
- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS LINE
- RELEASE EXTENT
- EXCAVATION EXTENT

NOTE: INCIDENT NUMBER nAB1710735309
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

IMAGE COURTESY OF ESRI

0 30 60
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
ROSS DRAW UNIT 57
UNIT K SEC 27 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX-Devon\GIS\MXD\034821011_RDU 57\034821011_FIG03_EXCAVATION_2021.mxd

TABLES

Table 1

Soil Analytical Results
Ross Draw Unit 57
Incident Number nAB1710735309
Eddy County, New Mexico
WPX Energy Permian, LLC.

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total DRO+GRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Delineation Samples										
BH01	06/26/2019	4	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	641
BH01A	06/26/2019	6	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	890
BH02	06/26/2019	2	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	146
BH02A	06/26/2019	4	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	360
BH03	06/26/2019	2	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	456
BH03A	06/26/2019	4	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	581
BH04	06/26/2019	2	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	36.6
BH04A	06/26/2019	4	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	19.9
Excavation Floor Samples										
FS01	06/15/2021	4	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	284
FS02	06/15/2021	4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	225
FS03	06/15/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	340

Table 1

Soil Analytical Results
Ross Draw Unit 57
Incident Number nAB1710735309
Eddy County, New Mexico
WPX Energy Permian, LLC.

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total DRO+GRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Excavation Sidewall Samples										
SW01	06/15/2021	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	338
SW02	06/15/2021	0 - 4	<0.00200	<0.00400	<49.9	<49.9	56.2	<49.9	56.2	223
SW03	06/15/2021	0 - 4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	205

Notes

ft - feet/foot
mg/kg - milligrams per kilograms
BTEX - benzene, toluene, ethylbenzene, and total xylenes
TPH - total petroleum hydrocarbons
DRO - diesel range organics
GRO - gasoline range organics
ORO - motor oil range organics
NMOCD - New Mexico Oil Conservation Division
NMAC - New Mexico Administrative Code
< - indicates result is less than the stated laboratory method practical quantitation limit
NE - Not Established
BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard
* indicates sample was collected in an area to immediately be reclaimed as per the reclamation standard

ATTACHMENT 1: REFERENCED WELL RECORD

HRL COMPLIANCE SOLUTIONS

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1		Location: Ross Draw Unit #57	
Date: 12/9/2020		Client: WPX Energy	
Drilling Method: Air Rotary	Sampling Method: None	Logged By: J. Linn, PG	Drilled By: Talon LPE
Gravel Pack Type: 10/20 Sand	Gravel Pack Depth Interval: 3 Bags	Seal Type: None / Seal Depth Interval: None	Latitude: 32.01032
Casing Type: PVC / Diameter: 2-inch / Depth Interval: 0-105 feet bgs		Boring Total Depth (ft. BGS): 110	Longitude: -103.87246
Screen Type: PVC / Slot: 0.010-inch / Diameter: 2-inch / Depth Interval: 105-110 ft		Well Total Depth (ft. BGS): 110	Depth to Water (ft. BTOC): > 110 / DTW Date: 12/16/2020

Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks	Well Completion
0	NM	L/M	D	N	N	NM	SM	NS	Tan/pale orange/pale brown poorly graded fine sand	
5										
10										
15										
20										
25										
30										
35										
40	NM	M	D	N	N	NM	SW	NS	Hard, dry pale pink orange well graded sand with gravel	
45										
50	NM	M	D	N	N	NM	SM	NS	Pale orange red tan silty fine sand	
55										
60	NM	L	D	N	N	NM	SW	NS	Dark brown greyish well graded sand	
65										
70	NM	L/M	D to SL M	N	N	NM	SW	NS	Grey well graded sand	
75										
80										
85										
90										
95										
100	NM	L/M	D	N	N	NM	SM	NS	Tan/pale orange/pale brown poorly graded fine sand - TD 110' bgs	
105										

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
WPX Energy Permian, LLC.	Ross Draw Unit 57 Eddy County, NM	TE034821011

Photo No.	Date
1	July 14, 2017

View of the Site during initial excavation activities.

Photo No.	Date
2	July 14, 2017

View of the Site during initial excavation activities.

PHOTOGRAPHIC LOG		
WPX Energy Permian, LLC.	Ross Draw Unit 57 Eddy County, NM	TE034821011

Photo No.	Date
3	June 15, 2021

East to southeastern view of excavation extent

Photo No.	Date
4	June 15, 2021

Northwestern view of excavation extent

ATTACHMENT 3: LITHOLOGIC/SAMPLING LOG

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH Name: BH01	Date: 6/26/2019
	Site Name: Ross Draw Unit 57	
	Incident Number nAB1710735309	
	WSP Job Number: TE034821011	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Lynda Laumbach	Method: Hand Auger
Lat/Long: 32.012704, -103.871785	Field Screening: Chloride, PID	Hole Diameter: 2.5 inches / Total Depth: 6 feet
Comments: Delineation; SAA - Same As Above		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
Excavated						0 1 2		Excavated
Dry	<109	92	No	-	-	3	SM	light brown silty sand (m.), poorly-graded, moderately compacted, trace organics (i.e. roots), no odor
Dry	436	64.1	No	BH01	4	4	SM	light brown silty sand (m.), poorly-graded, moderately compacted, trace organics (i.e. roots), no odor
Dry	704	18.4	No	-	-	5	SM	light brown silty sand (m.), poorly-graded, moderately compacted, trace organics (i.e. roots), no odor
Dry	824	6.5	No	BH01A	6	6	SM/cche	SAA SM and white caliche stratum interface at 4 feet
						Total Depth		

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH Name: BH02	Date: 6/26/2019
	Site Name: Ross Draw Unit 57	
	Incident Number nAB1710735309	
	WSP Job Number: TE034821011	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Lynda Laumbach	Method: Hand Auger
Lat/Long: 32.012709, -103.87187	Field Screening: Chloride, PID	Hole Diameter: 2.5 inches / Total Depth: 4 feet

Comments:
Delineation; SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
Dry	<109	17.2	No	-	-	1	SM	light brown silty sand (m.), poorly-graded, trace organics (i.e. roots), no odor
Dry	<109	15.6	No	BH02	2	2	SM	light brown silty sand (m.), poorly-graded, trace organics (i.e. roots), no odor
						3		
Dry	300	14.2	No	BH02A	4	4	SM	SAA

Total Depth

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH Name: BH03	Date: 6/26/2019
	Site Name: Ross Draw Unit 57	
	Incident Number nAB1710735309	
	WSP Job Number: TE034821011	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Lynda Laumbach	Method: Hand Auger
Lat/Long: 32.012663, -103.871878	Field Screening: Chloride, PID	Hole Diameter: 2.5 inches / Total Depth: 4 feet

Comments:
Delineation; SAA - Same As Above; Moisture Content "M" - Moist

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	260	26.4	No	-	-	1	SM	light brown silty sand (m.), poorly-graded, trace organics (i.e. roots), no odor
M	224	15.3	No	BH03	2	2	SM	light brown silty sand (m.), poorly-graded, trace organics (i.e. roots), no odor
						3		
M	224	30.8	No	BH03A	4	4	SM	SAA

Total Depth

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH Name:	Date:
BH04	6/26/2019
Site Name: Ross Draw Unit 57	
Incident Number nAB1710735309	
WSP Job Number: TE034821011	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Lynda Laumbach	Method: Hand Auger

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
32.012637, -103.871794	Chloride, PID	2.5 inches	4 feet

Comments:
Delineation; SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
Dry	<109	24.3	No	-	-	1	SM	light brown silty sand (m.), poorly-graded, moderately compacted, trace organics (i.e. roots), no odor
Dry	<109	41.4	No	BH04	2	2	SM	light brown silty sand (m.), poorly-graded, well compacted, trace organics (i.e. roots), no odor
						3		
Dry	<109	12.4	No	BH04A	4	4	SM/cche	SAA SM and white caliche stratum interface at 4 feet
						Total Depth		

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS

Analytical Report 629135

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDU 57

034819017

08-JUL-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

08-JUL-19

Project Manager: **Chris McKisson**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **629135**
RDU 57
Project Address: Delaware Basin

Chris McKisson:

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) 629135. 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. 629135 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,

Kalei Stout
Carlsbad Laboratory Director

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 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	06-26-19 08:00	4 ft	629135-001
BH01A	S	06-26-19 08:15	6 ft	629135-002
BH02	S	06-26-19 08:30	2 ft	629135-003
BH02A	S	06-26-19 08:45	4 ft	629135-004
BH03	S	06-26-19 09:00	2 ft	629135-005
BH03A	S	06-26-19 09:15	4 ft	629135-006
BH04	S	06-26-19 09:45	2 ft	629135-007
BH04A	S	06-26-19 10:00	4 ft	629135-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: RDU 57

Project ID: *034819017*
Work Order Number(s): *629135*

Report Date: *08-JUL-19*
Date Received: *06/26/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093980 Chloride by EPA 300
Lab Sample ID 629135-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 629135-001, -002, -003, -004, -005, -006, -007, -008.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3094023 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 629135-007,629135-006.

Batch: LBA-3094563 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3094635 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 629135-005.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 629135-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 629135-003, -004, -005, -006, -007, -008.
The Laboratory Control Sample for Benzene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 629135

LT Environmental, Inc., Arvada, CO

Project Name: RDU 57

Project Id: 034819017
Contact: Chris McKisson
Project Location: Delaware Basin

Date Received in Lab: Wed Jun-26-19 01:10 pm
Report Date: 08-JUL-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	629135-001		629135-002		629135-003		629135-004		629135-005		629135-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	4- ft		6- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-26-19 08:00		Jun-26-19 08:15		Jun-26-19 08:30		Jun-26-19 08:45		Jun-26-19 09:00		Jun-26-19 09:15	
BTEX by EPA 8021B SUB: T104704400-18-16	*Extracted:*	Jul-05-19 13:45		Jul-05-19 13:45		Jul-05-19 14:30		Jul-05-19 14:30		Jul-05-19 14:30		Jul-05-19 14:30	
	Analyzed:	Jul-07-19 07:21		Jul-07-19 07:44		Jul-07-19 17:03		Jul-07-19 17:27		Jul-07-19 17:50		Jul-07-19 18:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00397	0.00397	<0.00398	0.00398	<0.00402	0.00402	<0.00402	0.00402	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300 SUB: T104704400-18-16	*Extracted:*	Jun-28-19 11:45		Jun-28-19 11:45		Jun-28-19 11:45		Jun-28-19 11:45		Jun-28-19 11:45		Jun-28-19 11:45	
	Analyzed:	Jun-28-19 13:29		Jun-28-19 13:34		Jun-28-19 13:39		Jun-28-19 13:44		Jun-28-19 13:48		Jun-28-19 13:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		641	4.97	890	49.5	146	4.95	360	5.04	456	4.98	581	5.05
TPH by SW8015 Mod SUB: T104704400-18-16	*Extracted:*	Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00	
	Analyzed:	Jun-28-19 14:10		Jun-28-19 15:27		Jun-28-19 15:52		Jun-28-19 16:18		Jun-28-19 16:44		Jun-28-19 17:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

Kalei Stout
Carlsbad Laboratory Director

Certificate of Analysis Summary 629135

LT Environmental, Inc., Arvada, CO

Project Name: RDU 57

Project Id: 034819017
Contact: Chris McKisson
Project Location: Delaware Basin

Date Received in Lab: Wed Jun-26-19 01:10 pm
Report Date: 08-JUL-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	629135-007		629135-008									
	Field Id:	BH04		BH04A									
	Depth:	2- ft		4- ft									
	Matrix:	SOIL		SOIL									
	Sampled:	Jun-26-19 09:45		Jun-26-19 10:00									
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jul-05-19 14:30		Jul-05-19 14:30									
	Analyzed:	Jul-07-19 18:36		Jul-07-19 18:59									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Benzene		<0.00199	0.00199	<0.00200	0.00200								
Toluene		<0.00199	0.00199	<0.00200	0.00200								
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200								
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399								
o-Xylene		<0.00199	0.00199	<0.00200	0.00200								
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200								
Total BTEX		<0.00199	0.00199	<0.00200	0.00200								
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jun-28-19 11:45		Jun-28-19 11:45									
	Analyzed:	Jun-28-19 14:08		Jun-28-19 14:13									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Chloride		36.6	5.00	19.9	5.01								
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Jun-28-19 11:00		Jun-28-19 11:00									
	Analyzed:	Jun-28-19 17:35		Jun-28-19 18:01									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0								
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0								
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0								
Total TPH		<15.0	15.0	<15.0	15.0								
Total GRO-DRO		<15.0	15.0	<15.0	15.0								

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Kalei Stout
Carlsbad Laboratory Director

Final 1.000

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-001	Date Collected:	06.26.19 08.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 11.45	Basis:	Wet Weight
Seq Number:	3093980			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**641**	4.97	mg/kg	06.28.19 13.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	06.28.19 11.00	Basis:	Wet Weight
Seq Number:	3094023			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 14.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 14.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 14.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 14.10	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 14.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.28.19 14.10	
o-Terphenyl	84-15-1	74	%	70-135	06.28.19 14.10	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-001	Date Collected:	06.26.19 08.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	AMB	Date Prep:	07.05.19 13.45	Basis:	Wet Weight
Seq Number:	3094563			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.07.19 07.21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.07.19 07.21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.07.19 07.21	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.07.19 07.21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.07.19 07.21	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.07.19 07.21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.07.19 07.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	07.07.19 07.21	
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.07.19 07.21	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-002	Date Collected:	06.26.19 08.15	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 11.45	Basis:	Wet Weight
Seq Number:	3093980			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**890**	49.5	mg/kg	06.28.19 13.34		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	06.28.19 11.00	Basis:	Wet Weight
Seq Number:	3094023			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 15.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 15.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 15.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 15.27	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 15.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.28.19 15.27	
o-Terphenyl	84-15-1	71	%	70-135	06.28.19 15.27	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-002	Date Collected:	06.26.19 08.15	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	AMB	Date Prep:	07.05.19 13.45	Basis:	Wet Weight
Seq Number:	3094563			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.07.19 07.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.07.19 07.44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.07.19 07.44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.07.19 07.44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.07.19 07.44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.07.19 07.44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.07.19 07.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	07.07.19 07.44	
1,4-Difluorobenzene	540-36-3	91	%	70-130	07.07.19 07.44	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-003	Date Collected:	06.26.19 08.30	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 11.45	Basis:	Wet Weight
Seq Number:	3093980			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**146**	4.95	mg/kg	06.28.19 13.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	06.28.19 11.00	Basis:	Wet Weight
Seq Number:	3094023			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.28.19 15.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.28.19 15.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.28.19 15.52	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.28.19 15.52	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.28.19 15.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.28.19 15.52	
o-Terphenyl	84-15-1	75	%	70-135	06.28.19 15.52	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-003	Date Collected:	06.26.19 08.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	AMB	Date Prep:	07.05.19 14.30	Basis:	Wet Weight
Seq Number:	3094635			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.07.19 17.03	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.07.19 17.03	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.07.19 17.03	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.07.19 17.03	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.07.19 17.03	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.07.19 17.03	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.07.19 17.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	07.07.19 17.03	
4-Bromofluorobenzene	460-00-4	121	%	70-130	07.07.19 17.03	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-004	Date Collected:	06.26.19 08.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 11.45	Basis:	Wet Weight
Seq Number:	3093980			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**360**	5.04	mg/kg	06.28.19 13.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	06.28.19 11.00	Basis:	Wet Weight
Seq Number:	3094023			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 16.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 16.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 16.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 16.18	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 16.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	06.28.19 16.18	
o-Terphenyl	84-15-1	70	%	70-135	06.28.19 16.18	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-004	Date Collected:	06.26.19 08.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	AMB	Date Prep:	07.05.19 14.30	Basis:	Wet Weight
Seq Number:	3094635			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.07.19 17.27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.07.19 17.27	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.07.19 17.27	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.07.19 17.27	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.07.19 17.27	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.07.19 17.27	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.07.19 17.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	07.07.19 17.27	
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.07.19 17.27	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-005	Date Collected:	06.26.19 09.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 11.45	Basis:	Wet Weight
Seq Number:	3093980			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**456**	4.98	mg/kg	06.28.19 13.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	06.28.19 11.00	Basis:	Wet Weight
Seq Number:	3094023			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 16.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 16.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 16.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 16.44	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 16.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.28.19 16.44	
o-Terphenyl	84-15-1	71	%	70-135	06.28.19 16.44	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-005	Date Collected:	06.26.19 09.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	AMB	Date Prep:	07.05.19 14.30	Basis:	Wet Weight
Seq Number:	3094635			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.19 17.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.19 17.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.19 17.50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.07.19 17.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.19 17.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.19 17.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.19 17.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	07.07.19 17.50	
4-Bromofluorobenzene	460-00-4	131	%	70-130	07.07.19 17.50	**

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-006	Date Collected:	06.26.19 09.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 11.45	Basis:	Wet Weight
Seq Number:	3093980			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**581**	5.05	mg/kg	06.28.19 13.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	06.28.19 11.00	Basis:	Wet Weight
Seq Number:	3094023			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 17.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 17.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 17.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 17.10	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 17.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.28.19 17.10	
o-Terphenyl	84-15-1	67	%	70-135	06.28.19 17.10	**

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-006	Date Collected:	06.26.19 09.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	AMB	Date Prep:	07.05.19 14.30	Basis:	Wet Weight
Seq Number:	3094635			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.07.19 18.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.07.19 18.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.07.19 18.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.07.19 18.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.07.19 18.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.07.19 18.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.07.19 18.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	07.07.19 18.13	
4-Bromofluorobenzene	460-00-4	121	%	70-130	07.07.19 18.13	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-007	Date Collected:	06.26.19 09.45	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 11.45	Basis:	Wet Weight
Seq Number:	3093980			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.6**	5.00	mg/kg	06.28.19 14.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	06.28.19 11.00	Basis:	Wet Weight
Seq Number:	3094023			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 17.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 17.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 17.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 17.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 17.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.28.19 17.35	
o-Terphenyl	84-15-1	66	%	70-135	06.28.19 17.35	**

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-007	Date Collected:	06.26.19 09.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	AMB	Date Prep:	07.05.19 14.30	Basis:	Wet Weight
Seq Number:	3094635			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.07.19 18.36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.07.19 18.36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.07.19 18.36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.07.19 18.36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.07.19 18.36	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.07.19 18.36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.07.19 18.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	07.07.19 18.36	
4-Bromofluorobenzene	460-00-4	118	%	70-130	07.07.19 18.36	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-008	Date Collected:	06.26.19 10.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.28.19 11.45	Basis:	Wet Weight
Seq Number:	3093980			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.9**	5.01	mg/kg	06.28.19 14.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	06.28.19 11.00	Basis:	Wet Weight
Seq Number:	3094023			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.28.19 18.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.28.19 18.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.28.19 18.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.28.19 18.01	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.28.19 18.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.28.19 18.01	
o-Terphenyl	84-15-1	75	%	70-135	06.28.19 18.01	

Certificate of Analytical Results 629135

LT Environmental, Inc., Arvada, CO

RDU 57

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	06.26.19 13.10
Lab Sample Id:	629135-008	Date Collected:	06.26.19 10.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	AMB	Date Prep:	07.05.19 14.30	Basis:	Wet Weight
Seq Number:	3094635			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.19 18.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.19 18.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.19 18.59	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.07.19 18.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.19 18.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.19 18.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.19 18.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	07.07.19 18.59	
4-Bromofluorobenzene	460-00-4	122	%	70-130	07.07.19 18.59	

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 629135

LT Environmental, Inc.

RDU 57

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093980 Matrix: Solid Date Prep: 06.28.19
MB Sample Id: 7680968-1-BLK LCS Sample Id: 7680968-1-BKS LCSD Sample Id: 7680968-1-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	251	100	250	100	90-110	0	20	mg/kg	06.28.19 12:36	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093980 Matrix: Soil Date Prep: 06.28.19
Parent Sample Id: 629129-009 MS Sample Id: 629129-009 S MSD Sample Id: 629129-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	73.4	249	327	102	328	102	90-110	0	20	mg/kg	06.28.19 12:50	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093980 Matrix: Soil Date Prep: 06.28.19
Parent Sample Id: 629135-006 MS Sample Id: 629135-006 S MSD Sample Id: 629135-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	581	253	805	89	806	89	90-110	0	20	mg/kg	06.28.19 13:58	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3094023 Matrix: Solid Date Prep: 06.28.19
MB Sample Id: 7681081-1-BLK LCS Sample Id: 7681081-1-BKS LCSD Sample Id: 7681081-1-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)	<8.00	1000	935	94	970	97	70-135	4	20	mg/kg	06.28.19 13:18	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	1060	106	70-135	5	20	mg/kg	06.28.19 13:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		85		86		70-135	%	06.28.19 13:18
o-Terphenyl	70		88		90		70-135	%	06.28.19 13:18

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 629135

LT Environmental, Inc.

RDU 57

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3094023 | Matrix: Soil | Date Prep: 06.28.19
Parent Sample Id: 629135-001 | MS Sample Id: 629135-001 S | MSD Sample Id: 629135-001 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)	10.3	997	1020	101	1090	108	70-135	7	20	mg/kg	06.28.19 14:35	
Diesel Range Organics (DRO)	8.50	997	1070	106	1190	118	70-135	11	20	mg/kg	06.28.19 14:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		101		70-135	%	06.28.19 14:35
o-Terphenyl	87		95		70-135	%	06.28.19 14:35

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3094563 | Matrix: Solid | Date Prep: 07.05.19
MB Sample Id: 7681451-1-BLK | LCS Sample Id: 7681451-1-BKS | LCSD Sample Id: 7681451-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0848	85	0.0832	82	70-130	2	35	mg/kg	07.06.19 20:13	
Toluene	<0.000457	0.100	0.101	101	0.102	101	70-130	1	35	mg/kg	07.06.19 20:13	
Ethylbenzene	<0.00200	0.100	0.116	116	0.119	118	70-130	3	35	mg/kg	07.06.19 20:13	
m,p-Xylenes	<0.00102	0.200	0.226	113	0.234	116	70-130	3	35	mg/kg	07.06.19 20:13	
o-Xylene	0.000358	0.100	0.109	109	0.113	112	70-130	4	35	mg/kg	07.06.19 20:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		90		89		70-130	%	07.06.19 20:13
4-Bromofluorobenzene	108		109		116		70-130	%	07.06.19 20:13

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3094635 | Matrix: Solid | Date Prep: 07.05.19
MB Sample Id: 7681457-1-BLK | LCS Sample Id: 7681457-1-BKS | LCSD Sample Id: 7681457-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0880	89	0.0894	89	70-130	2	35	mg/kg	07.07.19 14:38	
Toluene	<0.00199	0.0994	0.100	101	0.102	101	70-130	2	35	mg/kg	07.07.19 14:38	
Ethylbenzene	<0.00199	0.0994	0.112	113	0.113	112	70-130	1	35	mg/kg	07.07.19 14:38	
m,p-Xylenes	<0.00101	0.199	0.221	111	0.221	110	70-130	0	35	mg/kg	07.07.19 14:38	
o-Xylene	<0.000342	0.0994	0.107	108	0.108	107	70-130	1	35	mg/kg	07.07.19 14:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		92		92		70-130	%	07.07.19 14:38
4-Bromofluorobenzene	112		108		112		70-130	%	07.07.19 14:38

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

Final 1.000

QC Summary 629135

LT Environmental, Inc.

RDU 57

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3094563 Matrix: Soil Date Prep: 07.05.19
Parent Sample Id: 629602-010 MS Sample Id: 629602-010 S MSD Sample Id: 629602-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0713	72	0.0750	75	70-130	5	35	mg/kg	07.06.19 20:59	
Toluene	<0.00199	0.0996	0.0864	87	0.0905	91	70-130	5	35	mg/kg	07.06.19 20:59	
Ethylbenzene	<0.00199	0.0996	0.0986	99	0.103	103	70-130	4	35	mg/kg	07.06.19 20:59	
m,p-Xylenes	<0.00398	0.199	0.191	96	0.200	100	70-130	5	35	mg/kg	07.06.19 20:59	
o-Xylene	<0.00199	0.0996	0.0927	93	0.0954	96	70-130	3	35	mg/kg	07.06.19 20:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		91		70-130	%	07.06.19 20:59
4-Bromofluorobenzene	119		119		70-130	%	07.06.19 20:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3094635 Matrix: Soil Date Prep: 07.05.19
Parent Sample Id: 629135-003 MS Sample Id: 629135-003 S MSD Sample Id: 629135-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0701	71	0.0632	63	70-130	10	35	mg/kg	07.07.19 15:24	X
Toluene	<0.00199	0.0994	0.0785	79	0.0741	74	70-130	6	35	mg/kg	07.07.19 15:24	
Ethylbenzene	<0.00199	0.0994	0.0863	87	0.0829	83	70-130	4	35	mg/kg	07.07.19 15:24	
m,p-Xylenes	<0.00101	0.199	0.167	84	0.160	80	70-130	4	35	mg/kg	07.07.19 15:24	
o-Xylene	<0.00199	0.0994	0.0776	78	0.0764	77	70-130	2	35	mg/kg	07.07.19 15:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		94		70-130	%	07.07.19 15:24
4-Bromofluorobenzene	117		121		70-130	%	07.07.19 15:24

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

Work Order No: 629135

XENCO LABORATORIES

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) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental, Inc., Permian office	Company Name:	LT Environmental
Address:	820 Megan Avenue, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	(970)285-9985 Email:		llaumbach@ltenv.com, cmckisson@ltenv.com, asmith@ltenv.com

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	RDU 57	Turn Around	
Project Number:	03482019017	Routine	X
P.O. Number:	2RP 4171	Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	8.8	Thermometer ID	TNM005
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	8

ANALYSIS REQUEST

Work Order Notes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
BH01	S	06/26/019	8:00	4'	1	X	X	X	
BH01A	S		8:15	6'	1				
BH02	S		8:30	2'	1				
BH02A	S		8:45	4'	1				
BH03	S		9:00	2'	1				
BH03A	S		9:15	4'	1				
BH04	S		9:45	2'	1				
BH04A	S		10:00	4'	1				

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		06/26/2019 13:10	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **42345**

Date/Time: 06/26/19 15:02
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
629135-001	S	BH01	06/26/19 08:00	E300_CL	Chloride by EPA 300	07/02/19	12/23/19	JKR	CL	
629135-001	S	BH01	06/26/19 08:00	SW8015MOD_NM	TPH by SW8015 Mod	07/02/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629135-001	S	BH01	06/26/19 08:00	SW8021B	BTEX by EPA 8021B	07/02/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629135-002	S	BH01A	06/26/19 08:15	SW8015MOD_NM	TPH by SW8015 Mod	07/02/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629135-002	S	BH01A	06/26/19 08:15	SW8021B	BTEX by EPA 8021B	07/02/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629135-002	S	BH01A	06/26/19 08:15	E300_CL	Chloride by EPA 300	07/02/19	12/23/19	JKR	CL	
629135-003	S	BH02	06/26/19 08:30	SW8021B	BTEX by EPA 8021B	07/02/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629135-003	S	BH02	06/26/19 08:30	SW8015MOD_NM	TPH by SW8015 Mod	07/02/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629135-003	S	BH02	06/26/19 08:30	E300_CL	Chloride by EPA 300	07/02/19	12/23/19	JKR	CL	
629135-004	S	BH02A	06/26/19 08:45	SW8021B	BTEX by EPA 8021B	07/02/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629135-004	S	BH02A	06/26/19 08:45	SW8015MOD_NM	TPH by SW8015 Mod	07/02/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629135-004	S	BH02A	06/26/19 08:45	E300_CL	Chloride by EPA 300	07/02/19	12/23/19	JKR	CL	
629135-005	S	BH03	06/26/19 09:00	SW8021B	BTEX by EPA 8021B	07/02/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629135-005	S	BH03	06/26/19 09:00	SW8015MOD_NM	TPH by SW8015 Mod	07/02/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629135-005	S	BH03	06/26/19 09:00	E300_CL	Chloride by EPA 300	07/02/19	12/23/19	JKR	CL	
629135-006	S	BH03A	06/26/19 09:15	SW8015MOD_NM	TPH by SW8015 Mod	07/02/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629135-006	S	BH03A	06/26/19 09:15	SW8021B	BTEX by EPA 8021B	07/02/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629135-006	S	BH03A	06/26/19 09:15	E300_CL	Chloride by EPA 300	07/02/19	12/23/19	JKR	CL	
629135-007	S	BH04	06/26/19 09:45	E300_CL	Chloride by EPA 300	07/02/19	12/23/19	JKR	CL	
629135-007	S	BH04	06/26/19 09:45	SW8021B	BTEX by EPA 8021B	07/02/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629135-007	S	BH04	06/26/19 09:45	SW8015MOD_NM	TPH by SW8015 Mod	07/02/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	
629135-008	S	BH04A	06/26/19 10:00	SW8021B	BTEX by EPA 8021B	07/02/19	07/10/19	JKR	BR4FBZ BZ BZME EBZ X	
629135-008	S	BH04A	06/26/19 10:00	E300_CL	Chloride by EPA 300	07/02/19	12/23/19	JKR	CL	
629135-008	S	BH04A	06/26/19 10:00	SW8015MOD_NM	TPH by SW8015 Mod	07/02/19	07/10/19	JKR	GRO-DRO PHCC10C28 PI	

Inter-Office Shipment

IOS Number **42345**

Date/Time: 06/26/19 15:02
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 06/26/2019

Received By: Brianna Teel

Date Received:

Cooler Temperature:

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 42345

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

Sent By: Elizabeth McClellan **Date Sent:** 06/26/2019 03:02 PM

Received By: **Date Received:**

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: _____

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/26/2019 01:10:00 PM

Work Order #: 629135

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

Temperature Measuring device used : T NM 007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	8.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**No**	Chilling in progress
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Xenco Midland
#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: Elizabeth McClellan Date: 06/26/2019

Checklist reviewed by: Jessica Kramer Date: 06/27/2019

Jessica Kramer

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-810-1
Laboratory Sample Delivery Group: Eddy County
Client Project/Site: RDU 57
Revision: 1

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Joseph Hernandez

JKramer

Authorized for release by:
6/30/2021 3:14:30 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: WSP USA Inc.
Project/Site: RDU 57

Laboratory Job ID: 890-810-1
SDG: Eddy County

Table of Contents

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Job ID: 890-810-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-810-1

Receipt
The samples were received on 6/15/2021 3:26 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

Receipt Exceptions
The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: FS01 (890-810-1), FS02 (890-810-2), FS03 (890-810-3), SW01 (890-810-4), SW02 (890-810-5) and SW03 (890-810-6).

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Client Sample ID: FS01
Date Collected: 06/15/21 08:30
Date Received: 06/15/21 15:26
Sample Depth: - 4

Lab Sample ID: 890-810-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 15:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 15:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 15:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/17/21 09:14	06/17/21 15:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 15:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/17/21 09:14	06/17/21 15:44	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		06/17/21 09:14	06/17/21 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*06/17/21 09:14*	*06/17/21 15:44*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/17/21 09:14*	*06/17/21 15:44*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		06/17/21 15:28	06/18/21 23:13	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		06/17/21 15:28	06/18/21 23:13	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		06/17/21 15:28	06/18/21 23:13	1
Total TPH	<49.7	U	49.7		mg/Kg		06/17/21 15:28	06/18/21 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*06/17/21 15:28*	*06/18/21 23:13*	*1*
o-Terphenyl	*103*		*70 - 130*	*06/17/21 15:28*	*06/18/21 23:13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**284**		24.9		mg/Kg			06/18/21 16:03	5

Client Sample ID: FS02
Date Collected: 06/15/21 09:05
Date Received: 06/15/21 15:26
Sample Depth: - 4

Lab Sample ID: 890-810-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 16:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 16:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 16:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/17/21 09:14	06/17/21 16:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 16:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/17/21 09:14	06/17/21 16:05	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		06/17/21 09:14	06/17/21 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*06/17/21 09:14*	*06/17/21 16:05*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/17/21 09:14*	*06/17/21 16:05*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Client Sample ID: FS02

Lab Sample ID: 890-810-2
Matrix: Solid
Date Collected: 06/15/21 09:05
Date Received: 06/15/21 15:26
Sample Depth: - 4

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 23:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 23:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 23:26	1
Total TPH	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 23:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*06/17/21 15:28*	*06/18/21 23:26*	*1*
o-Terphenyl	*90*		*70 - 130*	*06/17/21 15:28*	*06/18/21 23:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**225**		5.03		mg/Kg			06/18/21 16:08	1

Client Sample ID: FS03

Lab Sample ID: 890-810-3
Matrix: Solid
Date Collected: 06/15/21 11:45
Date Received: 06/15/21 15:26
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 17:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 17:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 17:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/17/21 09:14	06/17/21 17:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 17:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/17/21 09:14	06/17/21 17:26	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		06/17/21 09:14	06/17/21 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*06/17/21 09:14*	*06/17/21 17:26*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*06/17/21 09:14*	*06/17/21 17:26*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 23:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 23:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 23:38	1
Total TPH	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 23:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*06/17/21 15:28*	*06/18/21 23:38*	*1*
o-Terphenyl	*92*		*70 - 130*	*06/17/21 15:28*	*06/18/21 23:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**340**		25.0		mg/Kg			06/18/21 16:13	5

Client Sample Results

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Client Sample ID: SW01
Date Collected: 06/15/21 10:40
Date Received: 06/15/21 15:26
Sample Depth: 0 - 4

Lab Sample ID: 890-810-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 17:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 17:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 17:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/17/21 09:14	06/17/21 17:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/17/21 09:14	06/17/21 17:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/17/21 09:14	06/17/21 17:46	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		06/17/21 09:14	06/17/21 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*06/17/21 09:14*	*06/17/21 17:46*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/17/21 09:14*	*06/17/21 17:46*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/29/21 09:38	06/29/21 16:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/29/21 09:38	06/29/21 16:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/29/21 09:38	06/29/21 16:06	1
Total TPH	<50.0	U	50.0		mg/Kg		06/29/21 09:38	06/29/21 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*06/29/21 09:38*	*06/29/21 16:06*	*1*
o-Terphenyl	*95*		*70 - 130*	*06/29/21 09:38*	*06/29/21 16:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**338**		4.96		mg/Kg			06/18/21 16:57	1

Client Sample ID: SW02
Date Collected: 06/15/21 12:00
Date Received: 06/15/21 15:26
Sample Depth: 0 - 4

Lab Sample ID: 890-810-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 18:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 18:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 18:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/17/21 09:14	06/17/21 18:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 18:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/17/21 09:14	06/17/21 18:06	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		06/17/21 09:14	06/17/21 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/17/21 09:14*	*06/17/21 18:06*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*06/17/21 09:14*	*06/17/21 18:06*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Client Sample ID: SW02
Date Collected: 06/15/21 12:00
Date Received: 06/15/21 15:26
Sample Depth: 0 - 4

Lab Sample ID: 890-810-5
Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/17/21 15:28	06/19/21 00:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/17/21 15:28	06/19/21 00:04	1
Oil Range Organics (Over C28-C36)	**56.2**		49.9		mg/Kg		06/17/21 15:28	06/19/21 00:04	1
Total TPH	**56.2**		49.9		mg/Kg		06/17/21 15:28	06/19/21 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*153*	*S1+*	*70 - 130*	*06/17/21 15:28*	*06/19/21 00:04*	*1*
o-Terphenyl	*139*	*S1+*	*70 - 130*	*06/17/21 15:28*	*06/19/21 00:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**223**	**F1**	5.03		mg/Kg			06/18/21 17:02	1

Client Sample ID: SW03
Date Collected: 06/15/21 12:45
Date Received: 06/15/21 15:26
Sample Depth: 0 - 4

Lab Sample ID: 890-810-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 18:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 18:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 18:27	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/17/21 09:14	06/17/21 18:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 18:27	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/17/21 09:14	06/17/21 18:27	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		06/17/21 09:14	06/17/21 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*06/17/21 09:14*	*06/17/21 18:27*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*06/17/21 09:14*	*06/17/21 18:27*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/28/21 14:59	06/29/21 16:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/28/21 14:59	06/29/21 16:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/28/21 14:59	06/29/21 16:06	1
Total TPH	<50.0	U	50.0		mg/Kg		06/28/21 14:59	06/29/21 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*06/28/21 14:59*	*06/29/21 16:06*	*1*
o-Terphenyl	*98*		*70 - 130*	*06/28/21 14:59*	*06/29/21 16:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**205**		5.02		mg/Kg			06/18/21 17:17	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-810-1	FS01	109	100
890-810-2	FS02	110	94
890-810-3	FS03	113	95
890-810-4	SW01	113	94
890-810-5	SW02	102	99
890-810-6	SW03	105	95
LCS 880-4221/1-A	Lab Control Sample	117	100
LCS 880-4230/1-A	Lab Control Sample	117	101
LCSD 880-4221/2-A	Lab Control Sample Dup	122	101
LCSD 880-4230/2-A	Lab Control Sample Dup	119	98
MB 880-4221/5-A	Method Blank	105	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-810-1	FS01	108	103
890-810-2	FS02	92	90
890-810-3	FS03	94	92
890-810-4	SW01	89	95
890-810-5	SW02	153 S1+	139 S1+
890-810-6	SW03	95	98
LCS 880-4254/2-A	Lab Control Sample	102	106
LCS 880-4709/2-A	Lab Control Sample	100	97
LCS 880-4722/2-A	Lab Control Sample	97	98
LCSD 880-4254/3-A	Lab Control Sample Dup	100	104
LCSD 880-4709/3-A	Lab Control Sample Dup	100	96
LCSD 880-4722/3-A	Lab Control Sample Dup	112	107
MB 880-4254/1-A	Method Blank	108	107
MB 880-4709/1-A	Method Blank	93	100
MB 880-4722/1-A	Method Blank	90	101

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-4221/5-A
Matrix: Solid
Analysis Batch: 4223

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4221

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 12:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 12:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 12:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/17/21 09:14	06/17/21 12:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/17/21 09:14	06/17/21 12:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/17/21 09:14	06/17/21 12:39	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		06/17/21 09:14	06/17/21 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*06/17/21 09:14*	*06/17/21 12:39*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*06/17/21 09:14*	*06/17/21 12:39*	*1*

Lab Sample ID: LCS 880-4221/1-A
Matrix: Solid
Analysis Batch: 4223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4221

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07907		mg/Kg		79	70 - 130
Toluene	0.100	0.08063		mg/Kg		81	70 - 130
Ethylbenzene	0.100	0.09178		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	0.200	0.1995		mg/Kg		100	70 - 130
o-Xylene	0.100	0.1026		mg/Kg		103	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-4221/2-A
Matrix: Solid
Analysis Batch: 4223

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 4221

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08102		mg/Kg		81	70 - 130	2	35
Toluene	0.100	0.08263		mg/Kg		83	70 - 130	2	35
Ethylbenzene	0.100	0.09306		mg/Kg		93	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2039		mg/Kg		102	70 - 130	2	35
o-Xylene	0.100	0.1047		mg/Kg		105	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCS 880-4230/1-A
Matrix: Solid
Analysis Batch: 4223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07757		mg/Kg		78	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-4230/1-A
Matrix: Solid
Analysis Batch: 4223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.100	0.07945		mg/Kg		79	70 - 130
Ethylbenzene	0.100	0.08756		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.1869		mg/Kg		93	70 - 130
o-Xylene	0.100	0.09718		mg/Kg		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-4230/2-A
Matrix: Solid
Analysis Batch: 4223

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 4230

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07700		mg/Kg		77	70 - 130	1	35
Toluene	0.100	0.08148		mg/Kg		81	70 - 130	3	35
Ethylbenzene	0.100	0.09039		mg/Kg		90	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1950		mg/Kg		98	70 - 130	4	35
o-Xylene	0.100	0.1012		mg/Kg		101	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-4254/1-A
Matrix: Solid
Analysis Batch: 4283

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4254

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 21:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 21:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 21:06	1
Total TPH	<50.0	U	50.0		mg/Kg		06/17/21 15:28	06/18/21 21:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*06/17/21 15:28*	*06/18/21 21:06*	*1*
o-Terphenyl	*107*		*70 - 130*	*06/17/21 15:28*	*06/18/21 21:06*	*1*

Lab Sample ID: LCS 880-4254/2-A
Matrix: Solid
Analysis Batch: 4283

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4254

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	948.6		mg/Kg		95	70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-4254/2-A
Matrix: Solid
Analysis Batch: 4283

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4254

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (Over C10-C28)			1000	1068		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: LCSD 880-4254/3-A
Matrix: Solid
Analysis Batch: 4283

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 4254

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	901.2		mg/Kg		90	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1048		mg/Kg		105	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: MB 880-4709/1-A
Matrix: Solid
Analysis Batch: 4725

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4709

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/28/21 14:59	06/29/21 12:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/28/21 14:59	06/29/21 12:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/28/21 14:59	06/29/21 12:16	1
Total TPH	<50.0	U	50.0		mg/Kg		06/28/21 14:59	06/29/21 12:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*06/28/21 14:59*	*06/29/21 12:16*	*1*
o-Terphenyl	*100*		*70 - 130*	*06/28/21 14:59*	*06/29/21 12:16*	*1*

Lab Sample ID: LCS 880-4709/2-A
Matrix: Solid
Analysis Batch: 4725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4709

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	949.3		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	933.8		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*

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QC Sample Results

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-4709/2-A
Matrix: Solid
Analysis Batch: 4725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4709

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: LCSD 880-4709/3-A
Matrix: Solid
Analysis Batch: 4725

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 4709

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	935.9		mg/Kg		94	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	919.2		mg/Kg		92	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Lab Sample ID: MB 880-4722/1-A
Matrix: Solid
Analysis Batch: 4728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4722

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/29/21 09:38	06/29/21 12:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/29/21 09:38	06/29/21 12:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/29/21 09:38	06/29/21 12:16	1
Total TPH	<50.0	U	50.0		mg/Kg		06/29/21 09:38	06/29/21 12:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*06/29/21 09:38*	*06/29/21 12:16*	*1*
o-Terphenyl	*101*		*70 - 130*	*06/29/21 09:38*	*06/29/21 12:16*	*1*

Lab Sample ID: LCS 880-4722/2-A
Matrix: Solid
Analysis Batch: 4728

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4722

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	902.5		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)			1000	955.9		mg/Kg		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 880-4722/3-A
Matrix: Solid
Analysis Batch: 4728

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 4722

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1032		mg/Kg		103	70 - 130	13	20
Diesel Range Organics (Over C10-C28)			1000	1062		mg/Kg		106	70 - 130	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-4185/1-A
Matrix: Solid
Analysis Batch: 4300

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/18/21 14:01	1

Lab Sample ID: LCS 880-4185/2-A
Matrix: Solid
Analysis Batch: 4300

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	231.1		mg/Kg		92	90 - 110		

Lab Sample ID: LCSD 880-4185/3-A
Matrix: Solid
Analysis Batch: 4300

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	231.3		mg/Kg		93	90 - 110	0	20

Lab Sample ID: 890-810-5 MS
Matrix: Solid
Analysis Batch: 4300

Client Sample ID: SW02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	223	F1	250	436.2	F1	mg/Kg		85	90 - 110		

Lab Sample ID: 890-810-5 MSD
Matrix: Solid
Analysis Batch: 4300

Client Sample ID: SW02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	223	F1	250	435.5	F1	mg/Kg		85	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

GC VOA

Prep Batch: 4221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-1	FS01	Total/NA	Solid	5035	
890-810-2	FS02	Total/NA	Solid	5035	
890-810-3	FS03	Total/NA	Solid	5035	
890-810-4	SW01	Total/NA	Solid	5035	
890-810-5	SW02	Total/NA	Solid	5035	
890-810-6	SW03	Total/NA	Solid	5035	
MB 880-4221/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-4221/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-4221/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 4223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-1	FS01	Total/NA	Solid	8021B	4221
890-810-2	FS02	Total/NA	Solid	8021B	4221
890-810-3	FS03	Total/NA	Solid	8021B	4221
890-810-4	SW01	Total/NA	Solid	8021B	4221
890-810-5	SW02	Total/NA	Solid	8021B	4221
890-810-6	SW03	Total/NA	Solid	8021B	4221
MB 880-4221/5-A	Method Blank	Total/NA	Solid	8021B	4221
LCS 880-4221/1-A	Lab Control Sample	Total/NA	Solid	8021B	4221
LCS 880-4230/1-A	Lab Control Sample	Total/NA	Solid	8021B	4230
LCSD 880-4221/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	4221
LCSD 880-4230/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	4230

Prep Batch: 4230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-4230/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-4230/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 4254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-1	FS01	Total/NA	Solid	8015NM Prep	
890-810-2	FS02	Total/NA	Solid	8015NM Prep	
890-810-3	FS03	Total/NA	Solid	8015NM Prep	
890-810-5	SW02	Total/NA	Solid	8015NM Prep	
MB 880-4254/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-4254/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-4254/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 4283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-1	FS01	Total/NA	Solid	8015B NM	4254
890-810-2	FS02	Total/NA	Solid	8015B NM	4254
890-810-3	FS03	Total/NA	Solid	8015B NM	4254
890-810-5	SW02	Total/NA	Solid	8015B NM	4254
MB 880-4254/1-A	Method Blank	Total/NA	Solid	8015B NM	4254
LCS 880-4254/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	4254
LCSD 880-4254/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	4254

QC Association Summary

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

GC Semi VOA

Prep Batch: 4709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-6	SW03	Total/NA	Solid	8015NM Prep	
MB 880-4709/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-4709/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-4709/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 4722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-4	SW01	Total/NA	Solid	8015NM Prep	
MB 880-4722/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-4722/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-4722/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 4725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-6	SW03	Total/NA	Solid	8015B NM	4709
MB 880-4709/1-A	Method Blank	Total/NA	Solid	8015B NM	4709
LCS 880-4709/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	4709
LCSD 880-4709/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	4709

Analysis Batch: 4728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-4	SW01	Total/NA	Solid	8015B NM	4722
MB 880-4722/1-A	Method Blank	Total/NA	Solid	8015B NM	4722
LCS 880-4722/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	4722
LCSD 880-4722/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	4722

HPLC/IC

Leach Batch: 4185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-1	FS01	Soluble	Solid	DI Leach	
890-810-2	FS02	Soluble	Solid	DI Leach	
890-810-3	FS03	Soluble	Solid	DI Leach	
890-810-4	SW01	Soluble	Solid	DI Leach	
890-810-5	SW02	Soluble	Solid	DI Leach	
890-810-6	SW03	Soluble	Solid	DI Leach	
MB 880-4185/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-4185/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-4185/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-810-5 MS	SW02	Soluble	Solid	DI Leach	
890-810-5 MSD	SW02	Soluble	Solid	DI Leach	

Analysis Batch: 4300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-810-1	FS01	Soluble	Solid	300.0	4185
890-810-2	FS02	Soluble	Solid	300.0	4185
890-810-3	FS03	Soluble	Solid	300.0	4185
890-810-4	SW01	Soluble	Solid	300.0	4185
890-810-5	SW02	Soluble	Solid	300.0	4185
890-810-6	SW03	Soluble	Solid	300.0	4185
MB 880-4185/1-A	Method Blank	Soluble	Solid	300.0	4185

QC Association Summary

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

HPLC/IC (Continued)

Analysis Batch: 4300 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-4185/2-A	Lab Control Sample	Soluble	Solid	300.0	4185
LCSD 880-4185/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	4185
890-810-5 MS	SW02	Soluble	Solid	300.0	4185
890-810-5 MSD	SW02	Soluble	Solid	300.0	4185

Lab Chronicle

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Client Sample ID: FS01
Date Collected: 06/15/21 08:30
Date Received: 06/15/21 15:26

Lab Sample ID: 890-810-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	4221	06/17/21 09:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	4223	06/17/21 15:44	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	4254	06/17/21 15:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4283	06/18/21 23:13	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	4185	06/16/21 12:10	CH	XEN MID
Soluble	Analysis	300.0		5			4300	06/18/21 16:03	CH	XEN MID

Client Sample ID: FS02
Date Collected: 06/15/21 09:05
Date Received: 06/15/21 15:26

Lab Sample ID: 890-810-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	4221	06/17/21 09:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	4223	06/17/21 16:05	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	4254	06/17/21 15:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4283	06/18/21 23:26	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	4185	06/16/21 12:10	CH	XEN MID
Soluble	Analysis	300.0		1			4300	06/18/21 16:08	CH	XEN MID

Client Sample ID: FS03
Date Collected: 06/15/21 11:45
Date Received: 06/15/21 15:26

Lab Sample ID: 890-810-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	4221	06/17/21 09:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	4223	06/17/21 17:26	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	4254	06/17/21 15:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4283	06/18/21 23:38	AJ	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	4185	06/16/21 12:10	CH	XEN MID
Soluble	Analysis	300.0		5			4300	06/18/21 16:13	CH	XEN MID

Client Sample ID: SW01
Date Collected: 06/15/21 10:40
Date Received: 06/15/21 15:26

Lab Sample ID: 890-810-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	4221	06/17/21 09:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	4223	06/17/21 17:46	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	4722	06/29/21 09:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4728	06/29/21 16:06	AM	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	4185	06/16/21 12:10	CH	XEN MID
Soluble	Analysis	300.0		1			4300	06/18/21 16:57	CH	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Client Sample ID: SW02
Date Collected: 06/15/21 12:00
Date Received: 06/15/21 15:26

Lab Sample ID: 890-810-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	4221	06/17/21 09:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	4223	06/17/21 18:06	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	4254	06/17/21 15:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4283	06/19/21 00:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	4185	06/16/21 12:10	CH	XEN MID
Soluble	Analysis	300.0		1			4300	06/18/21 17:02	CH	XEN MID

Client Sample ID: SW03
Date Collected: 06/15/21 12:45
Date Received: 06/15/21 15:26

Lab Sample ID: 890-810-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	4221	06/17/21 09:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	4223	06/17/21 18:27	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	4709	06/28/21 14:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4725	06/29/21 16:06	AM	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	4185	06/16/21 12:10	CH	XEN MID
Soluble	Analysis	300.0		1			4300	06/18/21 17:17	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: RDU 57

Job ID: 890-810-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-810-1	FS01	Solid	06/15/21 08:30	06/15/21 15:26	- 4
890-810-2	FS02	Solid	06/15/21 09:05	06/15/21 15:26	- 4
890-810-3	FS03	Solid	06/15/21 11:45	06/15/21 15:26	- 4
890-810-4	SW01	Solid	06/15/21 10:40	06/15/21 15:26	0 - 4
890-810-5	SW02	Solid	06/15/21 12:00	06/15/21 15:26	0 - 4
890-810-6	SW03	Solid	06/15/21 12:45	06/15/21 15:26	0 - 4

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

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Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	JIM RALEY
Company Name:	WSP USA	Company Name:	WPX ENERGY
Address:	3300 N A STREET	Address:	5315 BUENA VISTA DR
City, State ZIP:	MIDLAND TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	281 782 2329	Email:	anna.byers@wsp.com

Work Order Comments

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

Project Name:	RDU 57	Turn Around	☒ Routine ☐ Rush
Project Number:	TE034821011	Due Date:	
Project Location:	EDDY COUNTY	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	ANNA BYERS		
PO #:	NAB1710735309		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	T-NM-009	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	1.6	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4	
Total Containers:		Corrected Temperature:	-0.2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH (EPA 8015M(Mod))	BTEX (EPA 8021B)	Chloride (EPA 300.0)
FS01	S	6/15/21	0830	4'	Comp	1				
FS02			0905	4'		1				
FS03			1145	4'		1				
SW01			1040	0-4'		1				
SW02			1200	0-4'		1				
SW03	↓	↓	1245	0-4'	↓	1				

890-810 Chain of Custody

Preservative Codes

None: NO — DI Water: H_2O
Cool: Cool — MeOH: Me
HCL: HC — HNO_3: HN
H_2SO_4: H_2 — NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

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 SiO_2 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 Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Anna Byers		10-15-21 1525			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-264 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 890-810-1
Address: 1211 W Florida Ave ,	Due Date Requested: 6/21/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: RDU 57	Project #: 88000203			
Site:	SSOW#:			

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA
M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Z other (specify)
Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	8015MOD_NM/8015NM_S_Prep Full TPH	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note
			Preservation Code:		X	X				X	
FS01 (890-810-1)	6/15/21	08 30 Mountain		Solid			X	X	X	1	
FS02 (890-810-2)	6/15/21	09 05 Mountain		Solid			X	X	X	1	
FS03 (890-810-3)	6/15/21	11 45 Mountain		Solid			X	X	X	1	
SW01 (890-810-4)	6/15/21	10 40 Mountain		Solid			X	X	X	1	
SW02 (890-810-5)	6/15/21	12 00 Mountain		Solid			X	X	X	1	
SW03 (890-810-6)	6/15/21	12 45 Mountain		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For ________ Months*

Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:	
Relinquished by: Cace Cuff 6-16-21	Date/Time:	Company	Received by: [signature]	Date/Time: 6-17-12.30AM	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-810-1
SDG Number: Eddy County

Login Number: 810
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-810-1
SDG Number: Eddy County

Login Number: 810
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland
List Creation: 06/17/21 12:06 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 53722

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 53722
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	9/14/2022