

Incident ID	NRM2034258716
District RP	
Facility ID	
Application ID	

Remediation Plan


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

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

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

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

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

Printed Name: Jim Raley Title: Environmental Professional
 Signature:  Date: 08/31/2021
 email: jim.raley@dnr.com Telephone: 575-689-7597

OCD Only

Received by: Robert Hamlet Date: 1/13/2022

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature:  Date: 1/13/2022

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	NRM2034258716
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Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC	OGRID: 246289
Contact Name: Jim Raley	Contact Telephone: 575-689-7597
Contact email: james.ralej@wpxenergy.com	Incident # (assigned by OCD)
Contact mailing address: 5315 Buena Vista Dr., Carlsbad NM 88220	

Location of Release Source

Latitude 32.0224991 _____ Longitude -103.8669281 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name ROSS DRAW UNIT #011	Site Type: Oil Well
Date Release Discovered: November 24 th , 2020	API# (if applicable) 30-015-24307

Unit Letter	Section	Township	Range	County
O	22	26S	30E	Eddy

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 7	Volume Recovered (bbls) 6
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Tank overflow allowed 7bbls of crude oil to be released to earthen secondary containment. 6 bbls was recovered.

State of New Mexico
Oil Conservation Division


Page 2

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

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u>James Raley</u> Title: <u>Environmental Specialist</u> Signature:  Date: <u>11/30/2020</u> email: <u>james.raley@wpenergy.com</u> Telephone: <u>575-689-7597</u>
<u>OCD Only</u> Received by: <u>Ramona Marcus</u> Date: <u>12/7/2020</u>

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

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


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

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

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

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Printed Name: Jim Raley Title: Environmental Professional
 Signature:  Date: 08/31/2021
 email: jim.raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: _____ Date: _____

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Printed Name: Jim Raley Title: Environmental Professional
 Signature:  Date: 08/31/2021
 email: jim.raley@div.com Telephone: 575-689-7597

OCD Only

Received by: _____ Date: _____

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____



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

August 31, 2021

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

**RE: Addendum Deferral Request
Ross Draw Unit #011
Incident Number NRM2034258716
Eddy County, New Mexico**

To Whom it May Concern:

WSP USA Inc. (WSP), on behalf of WPX Energy Permian, LLC. (WPX), presents the following Addendum to the original Deferral Request submitted on February 19, 2021. This Addendum provides clarification to the vertical definition of the release that was completed at the Ross Draw Unit #011 (Site) in Unit O, Section 22, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The New Mexico Oil Conservation Division (NMOCD) denied the original Deferral Request based on concern vertical definition of the release extent to the NMOCD Table 1 Closure Criteria (Closure Criteria) was not achieved. Based on the additional clarification below, WPX is submitting this Addendum Deferral Request in an effort to forbear from disturbing impacted soil within a tank battery earthen containment that may contribute to compromising the safety of field personnel during active operations or the structural integrity of existing above ground equipment and utilities.

RELEASE BACKGROUND

On November 24, 2020, a tank overflowed and released approximately 7 barrels (bbls) of crude oil into the tank battery earthen containment. Vacuum trucks were immediately dispatched and recovered approximately 6 bbls of crude oil. WPX reported the release to NMOCD and submitted a Corrective Action Form C-141 (Form C -141) on November 30, 2020 that was subsequently assigned Incident Number NRM2034258716.

The Deferral Request detailed site characterization 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). Based on the results of the Site Characterization, the following Closure Criteria were applied:

- 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; and
- Chloride: 20,000 mg/kg.

ADDENDUM RESPONSE

The following section of this report describes the interpretation of previous delineation soil sampling activities and laboratory analytical data. All previous remediation activities, soil sample analytical results, and the detailed site characterization can be referenced in the original report.

On September 25, 2020, NMOCD denied the Closure Request for Incident Number NRM2012229165 for the following reason:

- *Samples/ Sample areas for FS02, FS04, FS05, FS06, FS07 need to be vertically delineated to consider these areas for deferral.*

The vertical extent of remaining TPH impacts associated with the subject site is defined by boreholes BH05 through BH10 to approximately 1 to 1.5 feet bgs within the excavation/release area. Based on laboratory analytical data, vertical impacts do not extend beyond 1.5 feet bgs. The boreholes were collected within the 200 square foot grid of the floor sampling sample areas. Vertical extent for the sampling area for FS02 is defined by BH05, FS04 by BH10, FS05 by BH08, and FS07 by BH09. BH05 was collected at minimum 10 feet from the sampling area for FS06 but is defined vertically and laterally.

Borehole samples BH01 through BH04 were collected in every cardinal direction outside the tank battery containment to define the horizontal extent of impacts. The summary table and analytical reports for the lateral delineation samples may be found in the original Deferral Request.

VERTICAL DELINEATION TABLE

Failing Soil Sample Location	Depth (ft bgs)	TPH-GRO & TPH-DRO / TPH Concentrations (mg/kg)	Corresponding Vertical Delineation Sample ID	Depth (ft bgs)	Concentration (mg/kg)
FS02	0.3 – 0.5	2,910 / 2,910	BH05	0.75 – 1	<50.0 / <50.0



FS04	0.5 – 0.75	3,620 / 3,620	BH10	0.75 – 1	83.4 / 83.4
FS05	0.3 – 0.5	8,510 / 8,510	BH08	1 – 1.5	<50.1 / <50.1
FS06	0.5	20,800 / 20,800	BH05	0.75 – 1	<50.0 / <50.0
FS07	0.5 – 1	6,880 / 6,880	BH09	1 – 1.5	88.3 / 88.3

Notes:

ft – feet

bgs – below ground surface

mg/kg – milligrams per kilogram

TPH – Total Petroleum Hydrocarbons

GRO – Gasoline Range Organics

DRO – Diesel Range Organics

< - Less than detectible limit

Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Attachment 1.

DEFERRAL REQUEST

Based on the data collected from the final delineation soil samples, WPX requests to defer the remaining residual impacts within the tank battery earthen containment:

- Impacts have been removed to the maximum extent practicable (MEP) to limit future vertical migration and human exposure upon future Site visits. The remaining residual impacts within the subject area release lay in close proximity to and beneath above ground storage tanks and above ground utilities. The approximate area of residual impacts within the release area is presented on Figure 2. Depth to groundwater is estimated to be greater than 100 feet bgs based on the nearest well data and regional depth to water determination, and no other sensitive receptors are within the applicable



ranges. The chloride concentrations meet Table 1 Closure Criteria applicable for a depth to water of greater than 100 feet bgs for all soil samples.

- Removal of impacted soil is not a practical means of remediation due to the location of the release and surrounding production equipment and pipelines. Safety restrictions prevent the ability to remove all impacted soil associated with TPH-GRO/TPH-DRO and TPH exceedances. Based on the data indicating residual impacts are fully delineated, supportive evidence that any remaining TPH concentrations are not harmful to public health and environment and highly unlikely to impact groundwater based on the shallow nature of identified impacts. WPX requests to defer approximately 102 cubic yards of impacted soil associated with Incident Number NRM2034258716 in an effort to forbear from disturbing impacted soil within the earthen tank battery containment, which may also compromise the safety of field personnel during active operations.

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

Sincerely,

WSP USA

Joseph S. Hernandez
Associate Consultant, Geologist

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

cc: James Raley, Devon
United States Bureau of Land Management
NMOCD

Attachments:

- Figure 1 Site Receptor Map
- Figure 2 Estimated Deferral Area
- Table 1 Soil Analytical Results
- Attachment 1 Laboratory Analytical Reports

FIGURES

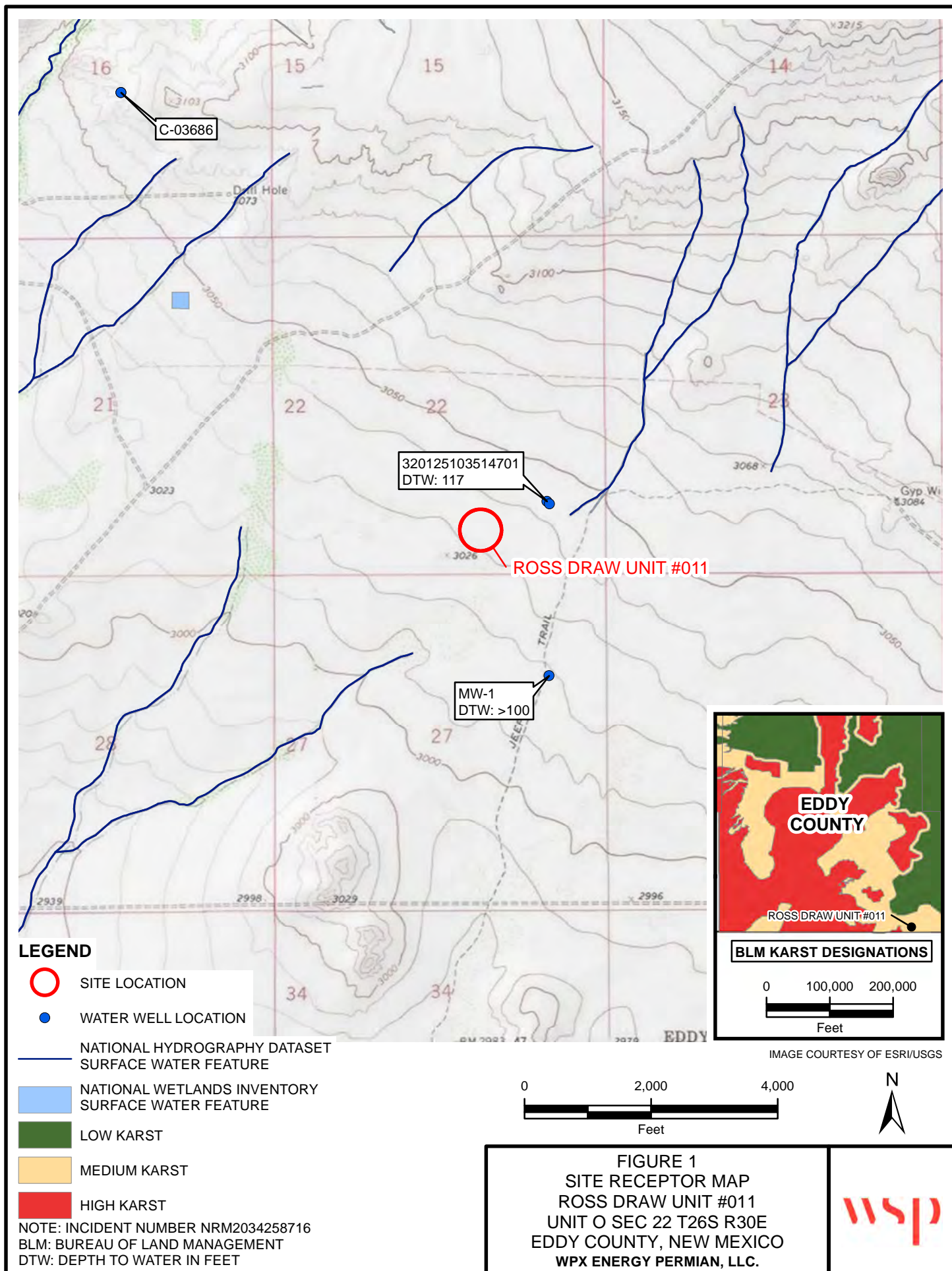




IMAGE COURTESY OF ESRI

LEGEND

- X** RELEASE LOCATION
- FLOOR SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS/PIPELINE
- WATER LINE
- - -** EXCAVATION EXTENT
- ESTIMATED DEFERRAL AREA (102 CUBIC YARDS)
- TANK BATTERY EARTHEN CONTAINMENT

NOTE: INCIDENT NUMBER NRM2034258716
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

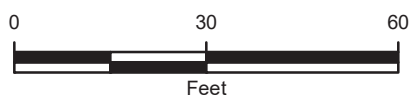


FIGURE 2
ESTIMATED DEFERRAL AREA
 ROSS DRAW UNIT #011
 UNIT O SEC 22 T26S R30E
 EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.



P:\WPX-Devon\GIS\MXD\034820044_ROSS DRAW UNIT #011034820044_FIG02_ESTIMATED_DEFERRAL_AREA_2021_1.mxd

TABLES

Table 1

Soil Analytical Results
 Ross Draw Unit #011
 Incident Number NRM2034258716
 Eddy County, New Mexico
 WPX Energy Permian, LLC.

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (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
Soil Samples										
FS01	12/18/2020	0.5	<0.0200	0.888	<50.0	<50.0	<50.0	<50.0	<50.0	1,970
FS02	12/18/2020	0.3 - 0.5	<0.0233	8.83	<250	2,910	<250	2,910	2,910	3,520
BH05	12/18/2020	0.75 - 1	<0.00204	<0.00204	<50.0	<50.0	<50.0	<50.0	<50.0	2,110
BH05	12/18/2020	1 - 1.5	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	42.7
FS03	12/18/2020	0.5 - 0.75	<0.00199	<0.00199	<49.8	51.2	<49.8	51.2	51.2	6,640
FS04	12/18/2020	0.5 - 0.75	<0.00200	<0.00200	278	3,340	<249	3,620	3,620	6,810
BH10	12/18/2020	0.75 - 1	<0.00200	<0.00200	<50.0	83.4	<50.0	83.4	83.4	6,610
BH10	12/18/2020	1 - 1.5	<0.00200	<0.00200	<49.8	52.8	<49.8	52.8	52.8	810
FS05	12/18/2020	0.3 - 0.5	<0.0196	<0.0196	1,040	7,470	<499	8,510	8,510	2,680
BH08	12/18/2020	0.75 - 1	<0.00200	<0.00200	<251	2,830	<251	2,830	2,830	852
BH08	12/18/2020	1 - 1.5	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	4,730
FS06	12/18/2020	0.5	<0.0196	0.761	1,130	19,700	<1,000	20,800	20,800	2,080
BH05	12/18/2020	0.75 - 1	<0.00204	<0.00204	<50.0	<50.0	<50.0	<50.0	<50.0	2,110
BH05	12/18/2020	1 - 1.5	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	42.7

Table 1

**Soil Analytical Results
 Ross Draw Unit #011
 Incident Number NRM2034258716
 Eddy County, New Mexico
 WPX Energy Permian, LLC.**

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (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
FS07	12/18/2020	0.5 - 1	<0.0175	<0.0175	522	6,360	<500	6,880	6,880	1,410
BH09	12/18/2020	0.75 - 1	<0.00200	<0.00200	706	4,290	<251	5,000	5,000	1,300
BH09	12/18/2020	1 - 1.5	<0.00202	<0.00202	<50.3	88.3	<50.3	88.3	88.3	2,320

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 - 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

Greyed data represents samples that were excavated

ATTACHMENT 1: LABORATORY ANALYTICAL REPORTS

Certificate of Analysis Summary 681867



WSP USA, Dallas, TX

Project Name: RDU 11

Project Id: TE034820044
Contact: Joseph Hernandez
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 12.18.2020 15:51
Report Date: 01.21.2021 08:50
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	681867-001	681867-002	681867-003	681867-004	681867-005	681867-006
	<i>Field Id:</i>	FS01	FS02	FS03	FS04	FS05	FS06
	<i>Depth:</i>	0.5- ft	0.3-0.5 ft	0.5-0.75 ft	0.3-0.75 ft	0.5-0.5 ft	0.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.18.2020 09:00	12.18.2020 09:02	12.18.2020 09:05	12.18.2020 09:07	12.18.2020 09:10	12.18.2020 09:12
BTEX by EPA 8021B	<i>Extracted:</i>	12.18.2020 17:04	12.18.2020 17:26	12.18.2020 17:04	12.18.2020 17:04	12.18.2020 17:04	12.18.2020 17:04
	<i>Analyzed:</i>	12.18.2020 23:38	12.19.2020 23:17	12.19.2020 00:23	12.19.2020 00:45	12.19.2020 01:08	12.19.2020 01:31
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0200 0.0200	<0.0233 0.0233	<0.00199 0.00199	<0.00200 0.00200	<0.0196 0.0196	<0.0196 0.0196
Toluene		<0.0200 0.0200	0.774 0.0233	<0.00199 0.00199	<0.00200 0.00200	<0.0196 0.0196	<0.0196 0.0196
Ethylbenzene		0.224 0.0200	1.55 0.0233	<0.00199 0.00199	<0.00200 0.00200	<0.0196 0.0196	<0.0196 0.0196
m,p-Xylenes		0.359 0.0400	4.43 0.0465	<0.00398 0.00398	<0.00399 0.00399	<0.0392 0.0392	<0.0392 0.0392
o-Xylene		0.305 0.0200	2.08 0.0233	<0.00199 0.00199	<0.00200 0.00200	<0.0196 0.0196	0.761 0.0196
Total Xylenes		0.664 0.0200	6.51 0.0233	<0.00199 0.00199	<0.00200 0.00200	<0.0196 0.0196	0.761 0.0196
Total BTEX		0.888 0.0200	8.83 0.0233	<0.00199 0.00199	<0.00200 0.00200	<0.0196 0.0196	0.761 0.0196
Inorganic Anions by EPA 300	<i>Extracted:</i>	12.19.2020 18:11	12.19.2020 18:11	12.19.2020 18:11	12.19.2020 18:11	12.19.2020 18:11	12.19.2020 18:11
	<i>Analyzed:</i>	12.21.2020 16:03	12.21.2020 16:21	12.21.2020 16:27	12.21.2020 16:33	12.21.2020 16:39	12.21.2020 16:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1970 50.3	3520 50.1	6640 50.1	6810 49.9	2680 49.9	2080 49.6
TPH by SW8015 Mod	<i>Extracted:</i>	12.19.2020 11:00	12.19.2020 11:00	12.19.2020 11:00	12.19.2020 11:00	12.19.2020 11:00	12.19.2020 11:00
	<i>Analyzed:</i>	12.22.2020 22:09	12.22.2020 22:30	12.22.2020 22:51	12.22.2020 23:11	12.22.2020 23:32	12.22.2020 23:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<250 250	<49.8 49.8	278 249	1040 499	1130 1000
Diesel Range Organics (DRO)		<50.0 50.0	2910 250	51.2 49.8	3340 249	7470 499	19700 1000
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<250 250	<49.8 49.8	<249 249	<499 499	<1000 1000
Total TPH		<50.0 50.0	2910 250	51.2 49.8	3620 249	8510 499	20800 1000

BRL - Below Reporting Limit

Jessica Kramer

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

Certificate of Analysis Summary 681867



WSP USA, Dallas, TX

Project Name: RDU 11

Project Id: TE034820044
Contact: Joseph Hernandez
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 12.18.2020 15:51
Report Date: 01.21.2021 08:50
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	681867-007				
	Field Id:	FS07				
	Depth:	0.5-1 ft				
	Matrix:	SOIL				
	Sampled:	12.18.2020 09:15				
BTEX by EPA 8021B	Extracted:	12.18.2020 17:04				
	Analyzed:	12.19.2020 02:51				
	Units/RL:	mg/kg RL				
	Benzene	<0.0175 0.0175				
	Toluene	<0.0175 0.0175				
	Ethylbenzene	<0.0175 0.0175				
	m,p-Xylenes	<0.0351 0.0351				
	o-Xylene	<0.0175 0.0175				
Total Xylenes	<0.0175 0.0175					
Total BTEX	<0.0175 0.0175					
Inorganic Anions by EPA 300	Extracted:	12.19.2020 18:11				
	Analyzed:	12.21.2020 17:03				
	Units/RL:	mg/kg RL				
Chloride	1410 50.1					
TPH by SW8015 Mod	Extracted:	12.19.2020 11:00				
	Analyzed:	12.23.2020 00:14				
	Units/RL:	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	522 500				
	Diesel Range Organics (DRO)	6360 500				
	Motor Oil Range Hydrocarbons (MRO)	<500 500				
Total TPH	6880 500					

BRL - Below Reporting Limit

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

Jessica Kramer



Analytical Report 681867

for

WSP USA

Project Manager: Joseph Hernandez

RDU 11

TE034820044

01.21.2021

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.21.2021

Project Manager: **Joseph Hernandez**

WSP USA

2777 N. Stemmons Freeway, Suite 1600

Dallas, TX 75207

Reference: Eurofins Xenco, LLC Report No(s): **681867**

RDU 11

Project Address: Eddy County, New Mexico

Joseph Hernandez:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 681867. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 681867 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 681867

WSP USA, Dallas, TX

RDU 11

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	12.18.2020 09:00	0.5 ft	681867-001
FS02	S	12.18.2020 09:02	0.3 - 0.5 ft	681867-002
FS03	S	12.18.2020 09:05	0.5 - 0.75 ft	681867-003
FS04	S	12.18.2020 09:07	0.3 - 0.75 ft	681867-004
FS05	S	12.18.2020 09:10	0.5 - 0.5 ft	681867-005
FS06	S	12.18.2020 09:12	0.5 ft	681867-006
FS07	S	12.18.2020 09:15	0.5 - 1 ft	681867-007



CASE NARRATIVE

Client Name: WSP USA

Project Name: RDU 11

Project ID: TE034820044
Work Order Number(s): 681867

Report Date: 01.21.2021
Date Received: 12.18.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: **FS01** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681867-001 Date Collected: 12.18.2020 09:00 Sample Depth: 0.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.19.2020 18:11 % Moisture:
 Seq Number: 3145671 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1970	50.3	mg/kg	12.21.2020 16:03		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.19.2020 11:00 % Moisture:
 Seq Number: 3145521 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.22.2020 22:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.22.2020 22:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.22.2020 22:09	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.22.2020 22:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.22.2020 22:09	
o-Terphenyl	84-15-1	113	%	70-135	12.22.2020 22:09	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS01	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-001	Date Collected: 12.18.2020 09:00	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	12.18.2020 23:38	U	1
Toluene	108-88-3	<0.0200	0.0200	mg/kg	12.18.2020 23:38	U	1
Ethylbenzene	100-41-4	0.224	0.0200	mg/kg	12.18.2020 23:38		1
m,p-Xylenes	179601-23-1	0.359	0.0400	mg/kg	12.18.2020 23:38		1
o-Xylene	95-47-6	0.305	0.0200	mg/kg	12.18.2020 23:38		1
Total Xylenes	1330-20-7	0.664	0.0200	mg/kg	12.18.2020 23:38		1
Total BTEX		0.888	0.0200	mg/kg	12.18.2020 23:38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	12.18.2020 23:38	
4-Bromofluorobenzene	460-00-4	108	%	70-130	12.18.2020 23:38	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS02	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-002	Date Collected: 12.18.2020 09:02	Sample Depth: 0.3 - 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		
Analyst: MAB	Date Prep: 12.19.2020 18:11	% Moisture:
Seq Number: 3145671		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3520	50.1	mg/kg	12.21.2020 16:21		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		
Analyst: CAC	Date Prep: 12.19.2020 11:00	% Moisture:
Seq Number: 3145521		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<250	250	mg/kg	12.22.2020 22:30	U	5
Diesel Range Organics (DRO)	C10C28DRO	2910	250	mg/kg	12.22.2020 22:30		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<250	250	mg/kg	12.22.2020 22:30	U	5
Total TPH	PHC635	2910	250	mg/kg	12.22.2020 22:30		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	12.22.2020 22:30	
o-Terphenyl	84-15-1	117	%	70-135	12.22.2020 22:30	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS02	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-002	Date Collected: 12.18.2020 09:02	Sample Depth: 0.3 - 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		
Analyst: MAB	Date Prep: 12.18.2020 17:26	% Moisture:
Seq Number: 3145518		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0233	0.0233	mg/kg	12.19.2020 23:17	U	1
Toluene	108-88-3	0.774	0.0233	mg/kg	12.19.2020 23:17		1
Ethylbenzene	100-41-4	1.55	0.0233	mg/kg	12.19.2020 23:17		1
m,p-Xylenes	179601-23-1	4.43	0.0465	mg/kg	12.19.2020 23:17		1
o-Xylene	95-47-6	2.08	0.0233	mg/kg	12.19.2020 23:17		1
Total Xylenes	1330-20-7	6.51	0.0233	mg/kg	12.19.2020 23:17		1
Total BTEX		8.83	0.0233	mg/kg	12.19.2020 23:17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.19.2020 23:17	
1,4-Difluorobenzene	540-36-3	86	%	70-130	12.19.2020 23:17	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS03	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-003	Date Collected: 12.18.2020 09:05	Sample Depth: 0.5 - 0.75 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		
Analyst: MAB	Date Prep: 12.19.2020 18:11	% Moisture:
Seq Number: 3145671		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6640	50.1	mg/kg	12.21.2020 16:27		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		
Analyst: CAC	Date Prep: 12.19.2020 11:00	% Moisture:
Seq Number: 3145521		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.22.2020 22:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	51.2	49.8	mg/kg	12.22.2020 22:51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.22.2020 22:51	U	1
Total TPH	PHC635	51.2	49.8	mg/kg	12.22.2020 22:51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	12.22.2020 22:51	
o-Terphenyl	84-15-1	113	%	70-135	12.22.2020 22:51	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS03	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-003	Date Collected: 12.18.2020 09:05	Sample Depth: 0.5 - 0.75 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.19.2020 00:23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.19.2020 00:23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.19.2020 00:23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.19.2020 00:23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.19.2020 00:23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.19.2020 00:23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.19.2020 00:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	12.19.2020 00:23	
1,4-Difluorobenzene	540-36-3	96	%	70-130	12.19.2020 00:23	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: **FS04** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681867-004 Date Collected: 12.18.2020 09:07 Sample Depth: 0.3 - 0.75 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.19.2020 18:11 % Moisture:
 Seq Number: 3145671 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6810	49.9	mg/kg	12.21.2020 16:33		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.19.2020 11:00 % Moisture:
 Seq Number: 3145521 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	278	249	mg/kg	12.22.2020 23:11		5
Diesel Range Organics (DRO)	C10C28DRO	3340	249	mg/kg	12.22.2020 23:11		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<249	249	mg/kg	12.22.2020 23:11	U	5
Total TPH	PHC635	3620	249	mg/kg	12.22.2020 23:11		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	12.22.2020 23:11	
o-Terphenyl	84-15-1	113	%	70-135	12.22.2020 23:11	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS04	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-004	Date Collected: 12.18.2020 09:07	Sample Depth: 0.3 - 0.75 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.2020 00:45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.2020 00:45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.2020 00:45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.19.2020 00:45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.2020 00:45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.2020 00:45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.2020 00:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	12.19.2020 00:45	
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.19.2020 00:45	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: **FS05** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681867-005 Date Collected: 12.18.2020 09:10 Sample Depth: 0.5 - 0.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.19.2020 18:11 % Moisture:
 Seq Number: 3145671 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2680	49.9	mg/kg	12.21.2020 16:39		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.19.2020 11:00 % Moisture:
 Seq Number: 3145521 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1040	499	mg/kg	12.22.2020 23:32		10
Diesel Range Organics (DRO)	C10C28DRO	7470	499	mg/kg	12.22.2020 23:32		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<499	499	mg/kg	12.22.2020 23:32	U	10
Total TPH	PHC635	8510	499	mg/kg	12.22.2020 23:32		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	12.22.2020 23:32	
o-Terphenyl	84-15-1	111	%	70-135	12.22.2020 23:32	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS05	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-005	Date Collected: 12.18.2020 09:10	Sample Depth: 0.5 - 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	12.19.2020 01:08	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	12.19.2020 01:08	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	12.19.2020 01:08	U	1
m,p-Xylenes	179601-23-1	<0.0392	0.0392	mg/kg	12.19.2020 01:08	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	12.19.2020 01:08	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	12.19.2020 01:08	U	1
Total BTEX		<0.0196	0.0196	mg/kg	12.19.2020 01:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	12.19.2020 01:08	
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.19.2020 01:08	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS06	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-006	Date Collected: 12.18.2020 09:12	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.19.2020 18:11	Basis: Wet Weight
Seq Number: 3145671		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2080	49.6	mg/kg	12.21.2020 16:57		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		% Moisture:
Analyst: CAC	Date Prep: 12.19.2020 11:00	Basis: Wet Weight
Seq Number: 3145521		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1130	1000	mg/kg	12.22.2020 23:53		20
Diesel Range Organics (DRO)	C10C28DRO	19700	1000	mg/kg	12.22.2020 23:53		20
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<1000	1000	mg/kg	12.22.2020 23:53	U	20
Total TPH	PHC635	20800	1000	mg/kg	12.22.2020 23:53		20

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	12.22.2020 23:53	
o-Terphenyl	84-15-1	96	%	70-135	12.22.2020 23:53	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: **FS06**
Lab Sample Id: 681867-006

Matrix: Soil
Date Collected: 12.18.2020 09:12

Date Received: 12.18.2020 15:51
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.18.2020 17:04

% Moisture:
Basis: Wet Weight

Seq Number: 3145459

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	12.19.2020 01:31	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	12.19.2020 01:31	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	12.19.2020 01:31	U	1
m,p-Xylenes	179601-23-1	<0.0392	0.0392	mg/kg	12.19.2020 01:31	U	1
o-Xylene	95-47-6	0.761	0.0196	mg/kg	12.19.2020 01:31		1
Total Xylenes	1330-20-7	0.761	0.0196	mg/kg	12.19.2020 01:31		1
Total BTEX		0.761	0.0196	mg/kg	12.19.2020 01:31		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.19.2020 01:31		
4-Bromofluorobenzene	460-00-4	124	%	70-130	12.19.2020 01:31		



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS07	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-007	Date Collected: 12.18.2020 09:15	Sample Depth: 0.5 - 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.19.2020 18:11	Basis: Wet Weight
Seq Number: 3145671		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1410	50.1	mg/kg	12.21.2020 17:03		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		% Moisture:
Analyst: CAC	Date Prep: 12.19.2020 11:00	Basis: Wet Weight
Seq Number: 3145521		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	522	500	mg/kg	12.23.2020 00:14		10
Diesel Range Organics (DRO)	C10C28DRO	6360	500	mg/kg	12.23.2020 00:14		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<500	500	mg/kg	12.23.2020 00:14	U	10
Total TPH	PHC635	6880	500	mg/kg	12.23.2020 00:14		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	12.23.2020 00:14	
o-Terphenyl	84-15-1	91	%	70-135	12.23.2020 00:14	



Certificate of Analytical Results 681867

WSP USA, Dallas, TX

RDU 11

Sample Id: FS07	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681867-007	Date Collected: 12.18.2020 09:15	Sample Depth: 0.5 - 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0175	0.0175	mg/kg	12.19.2020 02:51	U	1
Toluene	108-88-3	<0.0175	0.0175	mg/kg	12.19.2020 02:51	U	1
Ethylbenzene	100-41-4	<0.0175	0.0175	mg/kg	12.19.2020 02:51	U	1
m,p-Xylenes	179601-23-1	<0.0351	0.0351	mg/kg	12.19.2020 02:51	U	1
o-Xylene	95-47-6	<0.0175	0.0175	mg/kg	12.19.2020 02:51	U	1
Total Xylenes	1330-20-7	<0.0175	0.0175	mg/kg	12.19.2020 02:51	U	1
Total BTEX		<0.0175	0.0175	mg/kg	12.19.2020 02:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	12.19.2020 02:51	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.19.2020 02:51	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



WSP USA
RDU 11

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3145671
MB Sample Id: 7717519-1-BLK

Matrix: Solid
LCS Sample Id: 7717519-1-BKS

Prep Method: E300P
Date Prep: 12.19.2020
LCSD Sample Id: 7717519-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	261	104	90-110	0	20	mg/kg	12.21.2020 15:51	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3145671
Parent Sample Id: 681867-001

Matrix: Soil
MS Sample Id: 681867-001 S

Prep Method: E300P
Date Prep: 12.19.2020
MSD Sample Id: 681867-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1970	202	2160	94	2150	90	90-110	0	20	mg/kg	12.21.2020 16:09	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3145671
Parent Sample Id: 681876-004

Matrix: Soil
MS Sample Id: 681876-004 S

Prep Method: E300P
Date Prep: 12.19.2020
MSD Sample Id: 681876-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	103	200	316	107	317	107	90-110	0	20	mg/kg	12.21.2020 17:33	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145521
MB Sample Id: 7717503-1-BLK

Matrix: Solid
LCS Sample Id: 7717503-1-BKS

Prep Method: SW8015P
Date Prep: 12.19.2020
LCSD Sample Id: 7717503-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1030	103	1050	105	70-135	2	35	mg/kg	12.19.2020 13:21	
Diesel Range Organics (DRO)	<50.0	1000	974	97	1120	112	70-135	14	35	mg/kg	12.19.2020 13:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		116		113		70-135	%	12.19.2020 13:21
o-Terphenyl	97		97		106		70-135	%	12.19.2020 13:21

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145521
MB Sample Id: 7717503-1-BLK

Matrix: Solid

Prep Method: SW8015P
Date Prep: 12.19.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.19.2020 13:01	

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



WSP USA
RDU 11

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145521

Parent Sample Id: 681869-001

Matrix: Soil

MS Sample Id: 681869-001 S

Prep Method: SW8015P

Date Prep: 12.19.2020

MSD Sample Id: 681869-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1110	111	1090	109	70-135	2	35	mg/kg	12.19.2020 14:21	
Diesel Range Organics (DRO)	<49.9	997	1220	122	1140	114	70-135	7	35	mg/kg	12.19.2020 14:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		125		70-135	%	12.19.2020 14:21
o-Terphenyl	109		99		70-135	%	12.19.2020 14:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145459

MB Sample Id: 7717487-1-BLK

Matrix: Solid

LCS Sample Id: 7717487-1-BKS

Prep Method: SW5035A

Date Prep: 12.18.2020

LCSD Sample Id: 7717487-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0929	93	0.0942	94	70-130	1	35	mg/kg	12.18.2020 20:03	
Toluene	<0.00200	0.100	0.0864	86	0.0938	94	70-130	8	35	mg/kg	12.18.2020 20:03	
Ethylbenzene	<0.00200	0.100	0.0916	92	0.0951	95	71-129	4	35	mg/kg	12.18.2020 20:03	
m,p-Xylenes	<0.00400	0.200	0.186	93	0.199	100	70-135	7	35	mg/kg	12.18.2020 20:03	
o-Xylene	<0.00200	0.100	0.0913	91	0.0969	97	71-133	6	35	mg/kg	12.18.2020 20:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		97		99		70-130	%	12.18.2020 20:03
4-Bromofluorobenzene	116		108		111		70-130	%	12.18.2020 20:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145518

MB Sample Id: 7717509-1-BLK

Matrix: Solid

LCS Sample Id: 7717509-1-BKS

Prep Method: SW5035A

Date Prep: 12.18.2020

LCSD Sample Id: 7717509-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0953	95	0.0943	94	70-130	1	35	mg/kg	12.19.2020 14:21	
Toluene	<0.00200	0.100	0.0937	94	0.0908	91	70-130	3	35	mg/kg	12.19.2020 14:21	
Ethylbenzene	<0.00200	0.100	0.0845	85	0.0833	83	71-129	1	35	mg/kg	12.19.2020 14:21	
m,p-Xylenes	<0.00400	0.200	0.172	86	0.165	83	70-135	4	35	mg/kg	12.19.2020 14:21	
o-Xylene	<0.00200	0.100	0.0868	87	0.0845	85	71-133	3	35	mg/kg	12.19.2020 14:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		97		88		70-130	%	12.19.2020 14:21
4-Bromofluorobenzene	86		85		77		70-130	%	12.19.2020 14:21

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



WSP USA
RDU 11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145459

Parent Sample Id: 681869-001

Matrix: Soil

MS Sample Id: 681869-001 S

Prep Method: SW5035A

Date Prep: 12.18.2020

MSD Sample Id: 681869-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0961	96	0.0883	87	70-130	8	35	mg/kg	12.18.2020 20:48	
Toluene	<0.00200	0.100	0.0904	90	0.0796	79	70-130	13	35	mg/kg	12.18.2020 20:48	
Ethylbenzene	<0.00200	0.100	0.0922	92	0.0794	79	71-129	15	35	mg/kg	12.18.2020 20:48	
m,p-Xylenes	<0.00401	0.200	0.191	96	0.161	80	70-135	17	35	mg/kg	12.18.2020 20:48	
o-Xylene	<0.00200	0.100	0.0967	97	0.0834	83	71-133	15	35	mg/kg	12.18.2020 20:48	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		102		70-130	%	12.18.2020 20:48
4-Bromofluorobenzene	113		113		70-130	%	12.18.2020 20:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145518

Parent Sample Id: 681884-001

Matrix: Soil

MS Sample Id: 681884-001 S

Prep Method: SW5035A

Date Prep: 12.18.2020

MSD Sample Id: 681884-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.107	107	0.0917	92	70-130	15	35	mg/kg	12.19.2020 15:06	
Toluene	<0.00200	0.0998	0.102	102	0.0863	87	70-130	17	35	mg/kg	12.19.2020 15:06	
Ethylbenzene	<0.00200	0.0998	0.0924	93	0.0786	79	71-129	16	35	mg/kg	12.19.2020 15:06	
m,p-Xylenes	<0.00399	0.200	0.186	93	0.157	79	70-135	17	35	mg/kg	12.19.2020 15:06	
o-Xylene	<0.00200	0.0998	0.0936	94	0.0781	79	71-133	18	35	mg/kg	12.19.2020 15:06	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		94		70-130	%	12.19.2020 15:06
4-Bromofluorobenzene	87		87		70-130	%	12.19.2020 15:06

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



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) 595-3443 Lubbock, TX (806) 794-1296 Crashead, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 699-6701

Chain of Custody

Work Order No: 1681867

Project Manager: Joseph Hernandez	Bill to: (if different) Jim Raley
Company Name: MSP USA Inc	Company Name: WPX Energy
Address: 2380 North A St	Address: 515 Buena Vista Dr.
City, State ZIP: Midland, TX 79705	City, State ZIP: Crashead, NM 88220
Phone: (281) 702-2329	Email: j.hernandez@mosp.com

Project Name: RDU 11	Turn Around	Pres. Code	ANALYSIS REQUEST	Preservative Codes
Project Number: n/a	Routine <input checked="" type="checkbox"/>			
Project Location: Eddy County	Rush:			
Sampler's Name: Anna Byers	Due Date:			
PO #: nRM2034258716	Quote #:			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Sample Comments
FS01		S	12/13/16	0900	0.5'	1	TPH - EPA 8015 mod
FS02		S		0902	0.3-0.5'	1	BTEX - EPA 8021 B
FS03		S		0905	0.5-0.75'	1	Chloride - EPA 8008
FS04		S		0907	0.5-0.75'	1	
FS05		S		0910	0.3-0.5'	1	
FS06		S		0912	0.5'	1	
FS07		S		0915	0.5-1'	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 Ti 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 Ti 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 Xenoco. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) <u>Anna Byers</u>	Received by: (Signature) <u>Jim Raley</u>	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		12-18-20 1551			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: WSP USA

Date/ Time Received: 12.18.2020 03.51.00 PM

Work Order #: 681867

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T_NM_007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6*Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	Samples received in bulk containers.
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 12.18.2020
Cloe Clifton

Checklist reviewed by: Jessica Kramer Date: 12.21.2020
Jessica Kramer

Certificate of Analysis Summary 681876



WSP USA, Dallas, TX

Project Name: RDU 11

Project Id: TE034820044
Contact: Joseph Hernandez
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 12.18.2020 15:51
Report Date: 01.21.2021 08:49
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	681876-001	681876-002	681876-003	681876-004	681876-005	681876-006
	<i>Field Id:</i>	BH01	BH01	BH02	BH02	BH03	BH03
	<i>Depth:</i>	0.3-0.5 ft	0.75-1 ft	0.3-0.5 ft	0.75-1 ft	0.3-0.5 ft	0.75-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.18.2020 10:30	12.18.2020 10:35	12.18.2020 10:45	12.18.2020 10:47	12.18.2020 11:00	12.18.2020 11:05
BTEX by EPA 8021B	<i>Extracted:</i>	12.18.2020 17:04	12.18.2020 17:04	12.18.2020 17:04	12.18.2020 17:04	12.18.2020 17:04	12.18.2020 17:04
	<i>Analyzed:</i>	12.19.2020 03:48	12.19.2020 04:10	12.19.2020 04:33	12.19.2020 04:56	12.19.2020 05:18	12.19.2020 05:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00396 0.00396	<0.00402 0.00402	<0.00396 0.00396	<0.00401 0.00401	<0.00403 0.00403	<0.00398 0.00398
o-Xylene		<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Inorganic Anions by EPA 300	<i>Extracted:</i>	12.19.2020 18:11	12.19.2020 18:11	12.19.2020 18:11	12.19.2020 18:11	12.19.2020 18:11	12.19.2020 18:11
	<i>Analyzed:</i>	12.21.2020 17:09	12.21.2020 17:15	12.21.2020 17:21	12.21.2020 17:27	12.21.2020 17:45	12.21.2020 17:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		200 10.1	226 9.92	104 49.9	103 9.94	411 49.9	49.1 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	12.19.2020 11:00	12.19.2020 11:00	12.19.2020 11:00	12.19.2020 11:00	12.19.2020 11:00	12.19.2020 11:00
	<i>Analyzed:</i>	12.19.2020 16:01	12.19.2020 16:21	12.19.2020 16:41	12.19.2020 17:01	12.19.2020 17:21	12.19.2020 17:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.1 50.1
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.1 50.1
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.1 50.1

BRL - Below Reporting Limit

Jessica Kramer

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

Certificate of Analysis Summary 681876



WSP USA, Dallas, TX

Project Name: RDU 11

Project Id: TE034820044
Contact: Joseph Hernandez
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 12.18.2020 15:51
Report Date: 01.21.2021 08:49
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	681876-007	681876-008			
	<i>Field Id:</i>	BH04	BH04			
	<i>Depth:</i>	0.3-0.5 ft	0.75-1 ft			
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	12.18.2020 11:10	12.18.2020 11:15			
BTEX by EPA 8021B	<i>Extracted:</i>	12.18.2020 17:04	12.18.2020 17:04			
	<i>Analyzed:</i>	12.19.2020 06:03	12.19.2020 06:26			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00200 0.00200			
Toluene		<0.00200 0.00200	<0.00200 0.00200			
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200			
m,p-Xylenes		<0.00399 0.00399	<0.00399 0.00399			
o-Xylene		<0.00200 0.00200	<0.00200 0.00200			
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200			
Total BTEX		<0.00200 0.00200	<0.00200 0.00200			
Inorganic Anions by EPA 300	<i>Extracted:</i>	12.19.2020 18:11	12.19.2020 18:11			
	<i>Analyzed:</i>	12.21.2020 18:09	12.21.2020 18:15			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Chloride		244 50.4	175 10.0			
TPH by SW8015 Mod	<i>Extracted:</i>	12.19.2020 11:00	12.19.2020 11:00			
	<i>Analyzed:</i>	12.22.2020 21:28	12.22.2020 21:48			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0			
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0			
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0			
Total TPH		<49.9 49.9	<50.0 50.0			

BRL - Below Reporting Limit

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

Jessica Kramer



Analytical Report 681876

for

WSP USA

Project Manager: Joseph Hernandez

RDU 11

TE034820044

01.21.2021

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.21.2021

Project Manager: **Joseph Hernandez**

WSP USA

2777 N. Stemmons Freeway, Suite 1600

Dallas, TX 75207

Reference: Eurofins Xenco, LLC Report No(s): **681876**

RDU 11

Project Address: Eddy County, New Mexico

Joseph Hernandez:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 681876. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 681876 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 681876

WSP USA, Dallas, TX

RDU 11

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	12.18.2020 10:30	0.3 - 0.5 ft	681876-001
BH01	S	12.18.2020 10:35	0.75 - 1 ft	681876-002
BH02	S	12.18.2020 10:45	0.3 - 0.5 ft	681876-003
BH02	S	12.18.2020 10:47	0.75 - 1 ft	681876-004
BH03	S	12.18.2020 11:00	0.3 - 0.5 ft	681876-005
BH03	S	12.18.2020 11:05	0.75 - 1 ft	681876-006
BH04	S	12.18.2020 11:10	0.3 - 0.5 ft	681876-007
BH04	S	12.18.2020 11:15	0.75 - 1 ft	681876-008



CASE NARRATIVE

Client Name: WSP USA

Project Name: RDU 11

Project ID: TE034820044
Work Order Number(s): 681876

Report Date: 01.21.2021
Date Received: 12.18.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH01** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681876-001 Date Collected: 12.18.2020 10:30 Sample Depth: 0.3 - 0.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.19.2020 18:11 % Moisture:
 Seq Number: 3145671 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	200	10.1	mg/kg	12.21.2020 17:09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.19.2020 11:00 % Moisture:
 Seq Number: 3145521 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.19.2020 16:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.19.2020 16:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.19.2020 16:01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.19.2020 16:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	12.19.2020 16:01	
o-Terphenyl	84-15-1	107	%	70-135	12.19.2020 16:01	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH01	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-001	Date Collected: 12.18.2020 10:30	Sample Depth: 0.3 - 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.19.2020 03:48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.19.2020 03:48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.19.2020 03:48	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.19.2020 03:48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.19.2020 03:48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.19.2020 03:48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.19.2020 03:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	12.19.2020 03:48	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.19.2020 03:48	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH01** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681876-002 Date Collected: 12.18.2020 10:35 Sample Depth: 0.75 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.19.2020 18:11 % Moisture:
 Seq Number: 3145671 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	226	9.92	mg/kg	12.21.2020 17:15		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.19.2020 11:00 % Moisture:
 Seq Number: 3145521 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.19.2020 16:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.19.2020 16:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.19.2020 16:21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.19.2020 16:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	12.19.2020 16:21	
o-Terphenyl	84-15-1	113	%	70-135	12.19.2020 16:21	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH01	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-002	Date Collected: 12.18.2020 10:35	Sample Depth: 0.75 - 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		
Analyst: MAB	Date Prep: 12.18.2020 17:04	% Moisture:
Seq Number: 3145459		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.19.2020 04:10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.19.2020 04:10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.19.2020 04:10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.19.2020 04:10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.19.2020 04:10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.19.2020 04:10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.19.2020 04:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	12.19.2020 04:10	
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.19.2020 04:10	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH02** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681876-003 Date Collected: 12.18.2020 10:45 Sample Depth: 0.3 - 0.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.19.2020 18:11 % Moisture:
 Seq Number: 3145671 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	104	49.9	mg/kg	12.21.2020 17:21		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.19.2020 11:00 % Moisture:
 Seq Number: 3145521 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.19.2020 16:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.19.2020 16:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.19.2020 16:41	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.19.2020 16:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	12.19.2020 16:41	
o-Terphenyl	84-15-1	106	%	70-135	12.19.2020 16:41	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH02	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-003	Date Collected: 12.18.2020 10:45	Sample Depth: 0.3 - 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.19.2020 04:33	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.19.2020 04:33	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.19.2020 04:33	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.19.2020 04:33	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.19.2020 04:33	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.19.2020 04:33	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.19.2020 04:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.19.2020 04:33	
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.19.2020 04:33	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH02** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681876-004 Date Collected: 12.18.2020 10:47 Sample Depth: 0.75 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.19.2020 18:11 % Moisture:
 Seq Number: 3145671 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	103	9.94	mg/kg	12.21.2020 17:27		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.19.2020 11:00 % Moisture:
 Seq Number: 3145521 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.19.2020 17:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.19.2020 17:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.19.2020 17:01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.19.2020 17:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	12.19.2020 17:01	
o-Terphenyl	84-15-1	113	%	70-135	12.19.2020 17:01	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH02	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-004	Date Collected: 12.18.2020 10:47	Sample Depth: 0.75 - 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.2020 04:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.2020 04:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.2020 04:56	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.19.2020 04:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.2020 04:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.2020 04:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.2020 04:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	12.19.2020 04:56	
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.19.2020 04:56	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH03	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-005	Date Collected: 12.18.2020 11:00	Sample Depth: 0.3 - 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		
Analyst: MAB	Date Prep: 12.19.2020 18:11	% Moisture:
Seq Number: 3145671		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	411	49.9	mg/kg	12.21.2020 17:45		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		
Analyst: CAC	Date Prep: 12.19.2020 11:00	% Moisture:
Seq Number: 3145521		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.19.2020 17:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.19.2020 17:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.19.2020 17:21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.19.2020 17:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	12.19.2020 17:21	
o-Terphenyl	84-15-1	109	%	70-135	12.19.2020 17:21	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH03	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-005	Date Collected: 12.18.2020 11:00	Sample Depth: 0.3 - 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.19.2020 05:18	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.19.2020 05:18	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.19.2020 05:18	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.19.2020 05:18	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.19.2020 05:18	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.19.2020 05:18	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.19.2020 05:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.19.2020 05:18	
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.19.2020 05:18	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH03	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-006	Date Collected: 12.18.2020 11:05	Sample Depth: 0.75 - 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		
Analyst: MAB	Date Prep: 12.19.2020 18:11	% Moisture:
Seq Number: 3145671		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	49.1	10.0	mg/kg	12.21.2020 17:51		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		
Analyst: CAC	Date Prep: 12.19.2020 11:00	% Moisture:
Seq Number: 3145521		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.19.2020 17:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.19.2020 17:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.19.2020 17:41	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.19.2020 17:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.19.2020 17:41	
o-Terphenyl	84-15-1	97	%	70-135	12.19.2020 17:41	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH03	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-006	Date Collected: 12.18.2020 11:05	Sample Depth: 0.75 - 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.19.2020 05:41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.19.2020 05:41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.19.2020 05:41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.19.2020 05:41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.19.2020 05:41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.19.2020 05:41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.19.2020 05:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	12.19.2020 05:41	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.19.2020 05:41	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH04** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681876-007 Date Collected: 12.18.2020 11:10 Sample Depth: 0.3 - 0.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.19.2020 18:11 % Moisture:
 Seq Number: 3145671 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	244	50.4	mg/kg	12.21.2020 18:09		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.19.2020 11:00 % Moisture:
 Seq Number: 3145521 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.22.2020 21:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.22.2020 21:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.22.2020 21:28	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.22.2020 21:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	12.22.2020 21:28	
o-Terphenyl	84-15-1	109	%	70-135	12.22.2020 21:28	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH04	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-007	Date Collected: 12.18.2020 11:10	Sample Depth: 0.3 - 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.2020 06:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.2020 06:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.2020 06:03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.19.2020 06:03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.2020 06:03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.2020 06:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.2020 06:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.19.2020 06:03	
4-Bromofluorobenzene	460-00-4	125	%	70-130	12.19.2020 06:03	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH04	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-008	Date Collected: 12.18.2020 11:15	Sample Depth: 0.75 - 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		
Analyst: MAB	Date Prep: 12.19.2020 18:11	% Moisture:
Seq Number: 3145671		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	175	10.0	mg/kg	12.21.2020 18:15		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		
Analyst: CAC	Date Prep: 12.19.2020 11:00	% Moisture:
Seq Number: 3145521		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.22.2020 21:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.22.2020 21:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.22.2020 21:48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.22.2020 21:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	12.22.2020 21:48	
o-Terphenyl	84-15-1	103	%	70-135	12.22.2020 21:48	



Certificate of Analytical Results 681876

WSP USA, Dallas, TX

RDU 11

Sample Id: BH04	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681876-008	Date Collected: 12.18.2020 11:15	Sample Depth: 0.75 - 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.18.2020 17:04	Basis: Wet Weight
Seq Number: 3145459		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.2020 06:26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.2020 06:26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.2020 06:26	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.19.2020 06:26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.2020 06:26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.2020 06:26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.2020 06:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	12.19.2020 06:26	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.19.2020 06:26	



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



WSP USA
RDU 11

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3145671 Matrix: Solid Prep Method: E300P
 Date Prep: 12.19.2020
 MB Sample Id: 7717519-1-BLK LCS Sample Id: 7717519-1-BKS LCSD Sample Id: 7717519-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	261	104	90-110	0	20	mg/kg	12.21.2020 15:51	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3145671 Matrix: Soil Prep Method: E300P
 Date Prep: 12.19.2020
 Parent Sample Id: 681867-001 MS Sample Id: 681867-001 S MSD Sample Id: 681867-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1970	202	2160	94	2150	90	90-110	0	20	mg/kg	12.21.2020 16:09	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3145671 Matrix: Soil Prep Method: E300P
 Date Prep: 12.19.2020
 Parent Sample Id: 681876-004 MS Sample Id: 681876-004 S MSD Sample Id: 681876-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	103	200	316	107	317	107	90-110	0	20	mg/kg	12.21.2020 17:33	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145521 Matrix: Solid Prep Method: SW8015P
 Date Prep: 12.19.2020
 MB Sample Id: 7717503-1-BLK LCS Sample Id: 7717503-1-BKS LCSD Sample Id: 7717503-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1030	103	1050	105	70-135	2	35	mg/kg	12.19.2020 13:21	
Diesel Range Organics (DRO)	<50.0	1000	974	97	1120	112	70-135	14	35	mg/kg	12.19.2020 13:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		116		113		70-135	%	12.19.2020 13:21
o-Terphenyl	97		97		106		70-135	%	12.19.2020 13:21

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145521 Matrix: Solid Prep Method: SW8015P
 Date Prep: 12.19.2020
 MB Sample Id: 7717503-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.19.2020 13:01	

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



WSP USA
RDU 11

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145521

Parent Sample Id: 681869-001

Matrix: Soil

MS Sample Id: 681869-001 S

Prep Method: SW8015P

Date Prep: 12.19.2020

MSD Sample Id: 681869-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1110	111	1090	109	70-135	2	35	mg/kg	12.19.2020 14:21	
Diesel Range Organics (DRO)	<49.9	997	1220	122	1140	114	70-135	7	35	mg/kg	12.19.2020 14:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		125		70-135	%	12.19.2020 14:21
o-Terphenyl	109		99		70-135	%	12.19.2020 14:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145459

MB Sample Id: 7717487-1-BLK

Matrix: Solid

LCS Sample Id: 7717487-1-BKS

Prep Method: SW5035A

Date Prep: 12.18.2020

LCSD Sample Id: 7717487-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0929	93	0.0942	94	70-130	1	35	mg/kg	12.18.2020 20:03	
Toluene	<0.00200	0.100	0.0864	86	0.0938	94	70-130	8	35	mg/kg	12.18.2020 20:03	
Ethylbenzene	<0.00200	0.100	0.0916	92	0.0951	95	71-129	4	35	mg/kg	12.18.2020 20:03	
m,p-Xylenes	<0.00400	0.200	0.186	93	0.199	100	70-135	7	35	mg/kg	12.18.2020 20:03	
o-Xylene	<0.00200	0.100	0.0913	91	0.0969	97	71-133	6	35	mg/kg	12.18.2020 20:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		97		99		70-130	%	12.18.2020 20:03
4-Bromofluorobenzene	116		108		111		70-130	%	12.18.2020 20:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145459

Parent Sample Id: 681869-001

Matrix: Soil

MS Sample Id: 681869-001 S

Prep Method: SW5035A

Date Prep: 12.18.2020

MSD Sample Id: 681869-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0961	96	0.0883	87	70-130	8	35	mg/kg	12.18.2020 20:48	
Toluene	<0.00200	0.100	0.0904	90	0.0796	79	70-130	13	35	mg/kg	12.18.2020 20:48	
Ethylbenzene	<0.00200	0.100	0.0922	92	0.0794	79	71-129	15	35	mg/kg	12.18.2020 20:48	
m,p-Xylenes	<0.00401	0.200	0.191	96	0.161	80	70-135	17	35	mg/kg	12.18.2020 20:48	
o-Xylene	<0.00200	0.100	0.0967	97	0.0834	83	71-133	15	35	mg/kg	12.18.2020 20:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		102		70-130	%	12.18.2020 20:48
4-Bromofluorobenzene	113		113		70-130	%	12.18.2020 20:48

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



Chain of Custody

Work Order No: 1681876

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 Crashtad, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Page 1 of 1

Project Manager: Joseph Hernandez
Company Name: WSP USA Inc
Address: 3308 North A St
City, State ZIP: Midland, TX 79705
Phone: (281) 792-2329
Project Name: EDU 11
Project Number: n/a
Project Location: Eddy County
Sampler's Name: Anna Byers
PO #: ARW242423716
Quote #:
Turn Around:
Routine:
Rush:
Due Date:
Bill to: (if different): Jim Riley
Company Name: WDX Energy
Address: 5315 Buena Vista Dr
City, State ZIP: Carsbad, NM 88224
Email: jehernandez@wsp.com

Work Order Comments
 Program: PST PRP Brownfields RRC Superfund
 State of Project:
 Reporting Level: Level II Level III PST/UST TRRP Level IV
 Deliverables: EDD ADAPT Other:

SAMPLE RECEIPT
Temperature (°C): 12/0
Received Contact: Yes No
Cooler Custody Seals: Yes No
Sample Custody Seals: Yes No
Temp Blank: Yes No
Thermometer ID: 1-NW4-007
Correction Factor: -0.2
Total Containers: 8

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	ANALYSIS REQUEST	Preservative Codes
BHP1		S	12/18/15	10:34	0.3-0.5'	1		TPH - EPA 8015 mod	MeOH: Me None: NO HNO3: HN H2SO4: H2 HCL: HL NaOH: Na Zn Acetate+ NaOH: Zn
BHP2					0.3-0.5'	1		BTEX - EPA 8021 B	TAT starts the day received by the lab, if received by 4:00pm
BHP3					0.3-0.5'	1		Chloride - EPA 300.0	
BHP4					0.3-0.5'	1			
BHP5					0.3-0.5'	1			
BHP6					0.3-0.5'	1			

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

Relinquished by: (Signature) *Anna Byers* **Date/Time** 12-18-2015 5:11
Received by: (Signature) *Joe Wolfe* **Date/Time** 12-18-2015 5:11

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Anna Byers</i>	<i>Joe Wolfe</i>	12-18-2015 5:11			

Revised Date 02/26/19 Rev. 2019.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: WSP USA

Date/ Time Received: 12.18.2020 03.51.00 PM

Work Order #: 681876

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T_NM_007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6*Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	Samples received in bulk containers.
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 12.18.2020
Cloe Clifton

Checklist reviewed by: Jessica Kramer Date: 12.21.2020
Jessica Kramer

Certificate of Analysis Summary 681880



WSP USA, Dallas, TX

Project Name: RDU 11

Project Id: TE034820044
Contact: Joseph Hernandez
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 12.18.2020 15:51
Report Date: 01.22.2021 09:41
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	681880-001	681880-002	681880-003	681880-004	681880-005	681880-006
	<i>Field Id:</i>	BH05	BH05	BH06	BH06	BH07	BH07
	<i>Depth:</i>	0.75-1 ft	1-1.5 ft	0.75-1 ft	1-1.5 ft	0.75-1 ft	1-1.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.18.2020 12:24	12.18.2020 12:26	12.18.2020 12:29	12.18.2020 12:30	12.18.2020 12:33	12.18.2020 12:35
BTEX by EPA 8021B	<i>Extracted:</i>	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00
	<i>Analyzed:</i>	12.29.2020 05:51	12.29.2020 06:14	12.29.2020 06:36	12.29.2020 06:59	12.29.2020 07:21	12.29.2020 07:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00204 0.00204	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00204 0.00204	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00204 0.00204	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00408 0.00408	<0.00403 0.00403	<0.00399 0.00399	<0.00397 0.00397	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00204 0.00204	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00204 0.00204	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00204 0.00204	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Inorganic Anions by EPA 300	<i>Extracted:</i>	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00
	<i>Analyzed:</i>	12.28.2020 18:53	12.28.2020 19:11	12.28.2020 19:17	12.28.2020 19:23	12.28.2020 19:29	12.28.2020 19:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2110 49.5	42.7 10.0	354 10.0	76.7 10.1	1000 9.94	46.7 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	12.28.2020 12:00	12.28.2020 12:00	12.28.2020 12:00	12.28.2020 12:00	12.28.2020 12:00	12.28.2020 12:00
	<i>Analyzed:</i>	12.28.2020 19:36	12.28.2020 19:56	12.28.2020 20:16	12.28.2020 20:36	12.28.2020 20:56	12.28.2020 21:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<50.1 50.1	<50.3 50.3	<50.2 50.2	<50.1 50.1
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	<50.1 50.1	<50.3 50.3	<50.2 50.2	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<50.1 50.1	<50.3 50.3	<50.2 50.2	<50.1 50.1
Total TPH		<50.0 50.0	<49.8 49.8	<50.1 50.1	<50.3 50.3	<50.2 50.2	<50.1 50.1

BRL - Below Reporting Limit

Jessica Kramer

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

Certificate of Analysis Summary 681880



WSP USA, Dallas, TX

Project Name: RDU 11

Project Id: TE034820044
Contact: Joseph Hernandez
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 12.18.2020 15:51
Report Date: 01.22.2021 09:41
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	681880-007	681880-008	681880-009	681880-010	681880-011	681880-012
	<i>Field Id:</i>	BH08	BH08	BH09	BH09	BH10	BH10
	<i>Depth:</i>	0.75-1 ft	1-1.5 ft	0.75-1 ft	1-1.5 ft	0.75-1 ft	1-1.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.18.2020 12:36	12.18.2020 12:37	12.18.2020 12:40	12.18.2020 12:42	12.18.2020 12:45	12.18.2020 12:47
BTEX by EPA 8021B	<i>Extracted:</i>	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00
	<i>Analyzed:</i>	12.29.2020 08:06	12.29.2020 08:29	12.29.2020 08:51	12.29.2020 09:13	12.29.2020 10:33	12.29.2020 10:56
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402	<0.00401 0.00401	<0.00403 0.00403	<0.00401 0.00401	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00	12.28.2020 16:00
	<i>Analyzed:</i>	12.28.2020 19:52	12.28.2020 19:58	12.28.2020 20:04	12.28.2020 20:10	12.28.2020 20:16	12.28.2020 20:34
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		852 9.96	4730 50.1	1300 49.7	2320 49.6	6610 99.0	810 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	12.28.2020 12:00	12.28.2020 12:00	12.28.2020 12:00	12.28.2020 12:00	12.28.2020 12:00	12.28.2020 12:00
	<i>Analyzed:</i>	12.28.2020 21:37	12.28.2020 21:57	12.28.2020 20:56	12.28.2020 21:17	12.28.2020 21:37	12.28.2020 21:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<251 251	<50.1 50.1	706 251	<50.3 50.3	<50.0 50.0	<49.8 49.8
Diesel Range Organics (DRO)		2830 251	<50.1 50.1	4290 251	88.3 50.3	83.4 50.0	52.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<251 251	<50.1 50.1	<251 251	<50.3 50.3	<50.0 50.0	<49.8 49.8
Total TPH		2830 251	<50.1 50.1	5000 251	88.3 50.3	83.4 50.0	52.8 49.8

BRL - Below Reporting Limit

Jessica Kramer

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



Analytical Report 681880

for

WSP USA

Project Manager: Joseph Hernandez

RDU 11

TE034820044

01.22.2021

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.22.2021

Project Manager: **Joseph Hernandez**

WSP USA

2777 N. Stemmons Freeway, Suite 1600

Dallas, TX 75207

Reference: Eurofins Xenco, LLC Report No(s): **681880**

RDU 11

Project Address: Eddy County, New Mexico

Joseph Hernandez:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 681880. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 681880 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 681880

WSP USA, Dallas, TX

RDU 11

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH05	S	12.18.2020 12:24	0.75 - 1 ft	681880-001
BH05	S	12.18.2020 12:26	1 - 1.5 ft	681880-002
BH06	S	12.18.2020 12:29	0.75 - 1 ft	681880-003
BH06	S	12.18.2020 12:30	1 - 1.5 ft	681880-004
BH07	S	12.18.2020 12:33	0.75 - 1 ft	681880-005
BH07	S	12.18.2020 12:35	1 - 1.5 ft	681880-006
BH08	S	12.18.2020 12:36	0.75 - 1 ft	681880-007
BH08	S	12.18.2020 12:37	1 - 1.5 ft	681880-008
BH09	S	12.18.2020 12:40	0.75 - 1 ft	681880-009
BH09	S	12.18.2020 12:42	1 - 1.5 ft	681880-010
BH10	S	12.18.2020 12:45	0.75 - 1 ft	681880-011
BH10	S	12.18.2020 12:47	1 - 1.5 ft	681880-012



CASE NARRATIVE

Client Name: WSP USA

Project Name: RDU 11

Project ID: TE034820044
Work Order Number(s): 681880

Report Date: 01.22.2021
Date Received: 12.18.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH05	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-001	Date Collected: 12.18.2020 12:24	Sample Depth: 0.75 - 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		
Analyst: MAB	Date Prep: 12.28.2020 16:00	% Moisture:
Seq Number: 3146200		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2110	49.5	mg/kg	12.28.2020 18:53		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		
Analyst: CAC	Date Prep: 12.28.2020 12:00	% Moisture:
Seq Number: 3146194		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.28.2020 19:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.28.2020 19:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.28.2020 19:36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.28.2020 19:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	12.28.2020 19:36	
o-Terphenyl	84-15-1	99	%	70-135	12.28.2020 19:36	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH05	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-001	Date Collected: 12.18.2020 12:24	Sample Depth: 0.75 - 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.28.2020 16:00	Basis: Wet Weight
Seq Number: 3146281		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00204	0.00204	mg/kg	12.29.2020 05:51	U	1
Toluene	108-88-3	<0.00204	0.00204	mg/kg	12.29.2020 05:51	U	1
Ethylbenzene	100-41-4	<0.00204	0.00204	mg/kg	12.29.2020 05:51	U	1
m,p-Xylenes	179601-23-1	<0.00408	0.00408	mg/kg	12.29.2020 05:51	U	1
o-Xylene	95-47-6	<0.00204	0.00204	mg/kg	12.29.2020 05:51	U	1
Total Xylenes	1330-20-7	<0.00204	0.00204	mg/kg	12.29.2020 05:51	U	1
Total BTEX		<0.00204	0.00204	mg/kg	12.29.2020 05:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.29.2020 05:51	
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.29.2020 05:51	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH05** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681880-002 Date Collected: 12.18.2020 12:26 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.28.2020 16:00 % Moisture:
 Seq Number: 3146200 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.7	10.0	mg/kg	12.28.2020 19:11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.28.2020 12:00 % Moisture:
 Seq Number: 3146194 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.28.2020 19:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.28.2020 19:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.28.2020 19:56	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.28.2020 19:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	12.28.2020 19:56	
o-Terphenyl	84-15-1	97	%	70-135	12.28.2020 19:56	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH05	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-002	Date Collected: 12.18.2020 12:26	Sample Depth: 1 - 1.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		
Analyst: MAB	Date Prep: 12.28.2020 16:00	% Moisture:
Seq Number: 3146281		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.29.2020 06:14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.29.2020 06:14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.29.2020 06:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.29.2020 06:14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.29.2020 06:14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.29.2020 06:14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.29.2020 06:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.29.2020 06:14	
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.29.2020 06:14	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH06	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-003	Date Collected: 12.18.2020 12:29	Sample Depth: 0.75 - 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		
Analyst: MAB	Date Prep: 12.28.2020 16:00	% Moisture:
Seq Number: 3146200		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	354	10.0	mg/kg	12.28.2020 19:17		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		
Analyst: CAC	Date Prep: 12.28.2020 12:00	% Moisture:
Seq Number: 3146194		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.28.2020 20:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.28.2020 20:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.28.2020 20:16	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.28.2020 20:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.28.2020 20:16	
o-Terphenyl	84-15-1	109	%	70-135	12.28.2020 20:16	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH06	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-003	Date Collected: 12.18.2020 12:29	Sample Depth: 0.75 - 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.28.2020 16:00	Basis: Wet Weight
Seq Number: 3146281		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.29.2020 06:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.29.2020 06:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.29.2020 06:36	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.29.2020 06:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.29.2020 06:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.29.2020 06:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.29.2020 06:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.29.2020 06:36	
4-Bromofluorobenzene	460-00-4	116	%	70-130	12.29.2020 06:36	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH06** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681880-004 Date Collected: 12.18.2020 12:30 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.28.2020 16:00 % Moisture:
 Seq Number: 3146200 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	76.7	10.1	mg/kg	12.28.2020 19:23		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.28.2020 12:00 % Moisture:
 Seq Number: 3146194 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.28.2020 20:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.28.2020 20:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.28.2020 20:36	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.28.2020 20:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	12.28.2020 20:36	
o-Terphenyl	84-15-1	109	%	70-135	12.28.2020 20:36	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH06	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-004	Date Collected: 12.18.2020 12:30	Sample Depth: 1 - 1.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.28.2020 16:00	Basis: Wet Weight
Seq Number: 3146281		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.29.2020 06:59	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.29.2020 06:59	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.29.2020 06:59	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.29.2020 06:59	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.29.2020 06:59	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.29.2020 06:59	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.29.2020 06:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	12.29.2020 06:59	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.29.2020 06:59	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH07** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681880-005 Date Collected: 12.18.2020 12:33 Sample Depth: 0.75 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.28.2020 16:00 % Moisture:
 Seq Number: 3146200 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1000	9.94	mg/kg	12.28.2020 19:29		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.28.2020 12:00 % Moisture:
 Seq Number: 3146194 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.28.2020 20:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.28.2020 20:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.28.2020 20:56	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.28.2020 20:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	12.28.2020 20:56	
o-Terphenyl	84-15-1	117	%	70-135	12.28.2020 20:56	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH07	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-005	Date Collected: 12.18.2020 12:33	Sample Depth: 0.75 - 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.28.2020 16:00	Basis: Wet Weight
Seq Number: 3146281		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.29.2020 07:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.29.2020 07:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.29.2020 07:21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.29.2020 07:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.29.2020 07:21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.29.2020 07:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.29.2020 07:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.29.2020 07:21	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.29.2020 07:21	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH07** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681880-006 Date Collected: 12.18.2020 12:35 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.28.2020 16:00 % Moisture:
 Seq Number: 3146200 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.7	9.98	mg/kg	12.28.2020 19:46		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.28.2020 12:00 % Moisture:
 Seq Number: 3146194 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.28.2020 21:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.28.2020 21:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.28.2020 21:17	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.28.2020 21:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	12.28.2020 21:17	
o-Terphenyl	84-15-1	105	%	70-135	12.28.2020 21:17	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH07	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-006	Date Collected: 12.18.2020 12:35	Sample Depth: 1 - 1.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.28.2020 16:00	Basis: Wet Weight
Seq Number: 3146281		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.29.2020 07:44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.29.2020 07:44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.29.2020 07:44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.29.2020 07:44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.29.2020 07:44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.29.2020 07:44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.29.2020 07:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.29.2020 07:44	
4-Bromofluorobenzene	460-00-4	115	%	70-130	12.29.2020 07:44	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH08	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-007	Date Collected: 12.18.2020 12:36	Sample Depth: 0.75 - 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		
Analyst: MAB	Date Prep: 12.28.2020 16:00	% Moisture:
Seq Number: 3146200		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	852	9.96	mg/kg	12.28.2020 19:52		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		
Analyst: CAC	Date Prep: 12.28.2020 12:00	% Moisture:
Seq Number: 3146194		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<251	251	mg/kg	12.28.2020 21:37	U	5
Diesel Range Organics (DRO)	C10C28DRO	2830	251	mg/kg	12.28.2020 21:37		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<251	251	mg/kg	12.28.2020 21:37	U	5
Total TPH	PHC635	2830	251	mg/kg	12.28.2020 21:37		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	12.28.2020 21:37	
o-Terphenyl	84-15-1	107	%	70-135	12.28.2020 21:37	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH08**
Lab Sample Id: 681880-007

Matrix: Soil
Date Collected: 12.18.2020 12:36

Date Received: 12.18.2020 15:51
Sample Depth: 0.75 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.28.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3146281

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.29.2020 08:06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.29.2020 08:06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.29.2020 08:06	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.29.2020 08:06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.29.2020 08:06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.29.2020 08:06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.29.2020 08:06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.29.2020 08:06		
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.29.2020 08:06		



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH08** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681880-008 Date Collected: 12.18.2020 12:37 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.28.2020 16:00 % Moisture:
 Seq Number: 3146200 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4730	50.1	mg/kg	12.28.2020 19:58		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.28.2020 12:00 % Moisture:
 Seq Number: 3146194 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.28.2020 21:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.28.2020 21:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.28.2020 21:57	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.28.2020 21:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	12.28.2020 21:57	
o-Terphenyl	84-15-1	113	%	70-135	12.28.2020 21:57	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH08	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-008	Date Collected: 12.18.2020 12:37	Sample Depth: 1 - 1.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.28.2020 16:00	Basis: Wet Weight
Seq Number: 3146281		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.29.2020 08:29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.29.2020 08:29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.29.2020 08:29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.29.2020 08:29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.29.2020 08:29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.29.2020 08:29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.29.2020 08:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	12.29.2020 08:29	
4-Bromofluorobenzene	460-00-4	109	%	70-130	12.29.2020 08:29	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH09	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-009	Date Collected: 12.18.2020 12:40	Sample Depth: 0.75 - 1 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: MAB		
Analyst: MAB	Date Prep: 12.28.2020 16:00	% Moisture:
Seq Number: 3146200		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1300	49.7	mg/kg	12.28.2020 20:04		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: CAC		
Analyst: CAC	Date Prep: 12.28.2020 12:00	% Moisture:
Seq Number: 3146196		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	706	251	mg/kg	12.28.2020 20:56		5
Diesel Range Organics (DRO)	C10C28DRO	4290	251	mg/kg	12.28.2020 20:56		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<251	251	mg/kg	12.28.2020 20:56	U	5
Total TPH	PHC635	5000	251	mg/kg	12.28.2020 20:56		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	12.28.2020 20:56	
o-Terphenyl	84-15-1	113	%	70-135	12.28.2020 20:56	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH09	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-009	Date Collected: 12.18.2020 12:40	Sample Depth: 0.75 - 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		
Analyst: MAB	Date Prep: 12.28.2020 16:00	% Moisture:
Seq Number: 3146281		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.29.2020 08:51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.29.2020 08:51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.29.2020 08:51	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.29.2020 08:51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.29.2020 08:51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.29.2020 08:51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.29.2020 08:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	12.29.2020 08:51	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.29.2020 08:51	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH09** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681880-010 Date Collected: 12.18.2020 12:42 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.28.2020 16:00 % Moisture:
 Seq Number: 3146200 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2320	49.6	mg/kg	12.28.2020 20:10		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.28.2020 12:00 % Moisture:
 Seq Number: 3146196 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.28.2020 21:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	88.3	50.3	mg/kg	12.28.2020 21:17		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.28.2020 21:17	U	1
Total TPH	PHC635	88.3	50.3	mg/kg	12.28.2020 21:17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	12.28.2020 21:17	
o-Terphenyl	84-15-1	104	%	70-135	12.28.2020 21:17	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: BH09	Matrix: Soil	Date Received: 12.18.2020 15:51
Lab Sample Id: 681880-010	Date Collected: 12.18.2020 12:42	Sample Depth: 1 - 1.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 12.28.2020 16:00	Basis: Wet Weight
Seq Number: 3146281		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.29.2020 09:13	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.29.2020 09:13	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.29.2020 09:13	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.29.2020 09:13	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.29.2020 09:13	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.29.2020 09:13	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.29.2020 09:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.29.2020 09:13	
4-Bromofluorobenzene	460-00-4	125	%	70-130	12.29.2020 09:13	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH10** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681880-011 Date Collected: 12.18.2020 12:45 Sample Depth: 0.75 - 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.28.2020 16:00 % Moisture:
 Seq Number: 3146200 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6610	99.0	mg/kg	12.28.2020 20:16		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.28.2020 12:00 % Moisture:
 Seq Number: 3146196 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.28.2020 21:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	83.4	50.0	mg/kg	12.28.2020 21:37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.28.2020 21:37	U	1
Total TPH	PHC635	83.4	50.0	mg/kg	12.28.2020 21:37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.28.2020 21:37	
o-Terphenyl	84-15-1	114	%	70-135	12.28.2020 21:37	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH10**
Lab Sample Id: 681880-011

Matrix: Soil
Date Collected: 12.18.2020 12:45

Date Received: 12.18.2020 15:51
Sample Depth: 0.75 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.28.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3146281

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.29.2020 10:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.29.2020 10:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.29.2020 10:33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.29.2020 10:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.29.2020 10:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.29.2020 10:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.29.2020 10:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	12.29.2020 10:33		
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.29.2020 10:33		



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH10** Matrix: Soil Date Received: 12.18.2020 15:51
 Lab Sample Id: 681880-012 Date Collected: 12.18.2020 12:47 Sample Depth: 1 - 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 12.28.2020 16:00 % Moisture:
 Seq Number: 3146200 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	810	10.0	mg/kg	12.28.2020 20:34		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 12.28.2020 12:00 % Moisture:
 Seq Number: 3146196 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.28.2020 21:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	52.8	49.8	mg/kg	12.28.2020 21:57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.28.2020 21:57	U	1
Total TPH	PHC635	52.8	49.8	mg/kg	12.28.2020 21:57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	12.28.2020 21:57	
o-Terphenyl	84-15-1	114	%	70-135	12.28.2020 21:57	



Certificate of Analytical Results 681880

WSP USA, Dallas, TX

RDU 11

Sample Id: **BH10**
 Lab Sample Id: 681880-012

Matrix: Soil
 Date Collected: 12.18.2020 12:47

Date Received: 12.18.2020 15:51
 Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 12.28.2020 16:00

% Moisture:
 Basis: Wet Weight

Seq Number: 3146281

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.29.2020 10:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.29.2020 10:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.29.2020 10:56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.29.2020 10:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.29.2020 10:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.29.2020 10:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.29.2020 10:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.29.2020 10:56	
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.29.2020 10:56	



WSP USA
RDU 11

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3146200
MB Sample Id: 7717985-1-BLK

Matrix: Solid
LCS Sample Id: 7717985-1-BKS

Prep Method: E300P
Date Prep: 12.28.2020
LCSD Sample Id: 7717985-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	258	103	90-110	0	20	mg/kg	12.28.2020 18:41	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3146200
Parent Sample Id: 681880-001

Matrix: Soil
MS Sample Id: 681880-001 S

Prep Method: E300P
Date Prep: 12.28.2020
MSD Sample Id: 681880-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2110	199	2300	95	2320	105	90-110	1	20	mg/kg	12.28.2020 18:59	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3146200
Parent Sample Id: 681880-011

Matrix: Soil
MS Sample Id: 681880-011 S

Prep Method: E300P
Date Prep: 12.28.2020
MSD Sample Id: 681880-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6610	200	6800	95	6810	99	90-110	0	20	mg/kg	12.28.2020 20:22	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3146194
MB Sample Id: 7717990-1-BLK

Matrix: Solid
LCS Sample Id: 7717990-1-BKS

Prep Method: SW8015P
Date Prep: 12.28.2020
LCSD Sample Id: 7717990-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	998	100	1080	108	70-135	8	35	mg/kg	12.28.2020 13:52	
Diesel Range Organics (DRO)	<50.0	1000	937	94	1060	106	70-135	12	35	mg/kg	12.28.2020 13:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		103		101		70-135	%	12.28.2020 13:52
o-Terphenyl	107		102		99		70-135	%	12.28.2020 13:52

Analytical Method: TPH by SW8015 Mod

Seq Number: 3146196
MB Sample Id: 7717992-1-BLK

Matrix: Solid
LCS Sample Id: 7717992-1-BKS

Prep Method: SW8015P
Date Prep: 12.28.2020
LCSD Sample Id: 7717992-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1100	110	1160	116	70-135	5	35	mg/kg	12.28.2020 13:52	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	1020	102	70-135	3	35	mg/kg	12.28.2020 13:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		118		106		70-135	%	12.28.2020 13:52
o-Terphenyl	114		92		107		70-135	%	12.28.2020 13:52

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



WSP USA
RDU 11

Analytical Method: TPH by SW8015 Mod
Seq Number: 3146194

Matrix: Solid
MB Sample Id: 7717990-1-BLK

Prep Method: SW8015P
Date Prep: 12.28.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.28.2020 13:32	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3146196

Matrix: Solid
MB Sample Id: 7717992-1-BLK

Prep Method: SW8015P
Date Prep: 12.28.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.28.2020 13:32	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3146194
Parent Sample Id: 682305-001

Matrix: Soil
MS Sample Id: 682305-001 S

Prep Method: SW8015P
Date Prep: 12.28.2020
MSD Sample Id: 682305-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	1120	112	980	98	70-135	13	35	mg/kg	12.28.2020 14:55	
Diesel Range Organics (DRO)	<49.9	998	1000	100	1130	113	70-135	12	35	mg/kg	12.28.2020 14:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		102		70-135	%	12.28.2020 14:55
o-Terphenyl	106		116		70-135	%	12.28.2020 14:55

Analytical Method: TPH by SW8015 Mod
Seq Number: 3146196
Parent Sample Id: 682650-002

Matrix: Soil
MS Sample Id: 682650-002 S

Prep Method: SW8015P
Date Prep: 12.28.2020
MSD Sample Id: 682650-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1200	120	1290	129	70-135	7	35	mg/kg	12.28.2020 14:55	
Diesel Range Organics (DRO)	96.8	1000	1210	111	1090	99	70-135	10	35	mg/kg	12.28.2020 14:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		107		70-135	%	12.28.2020 14:55
o-Terphenyl	106		114		70-135	%	12.28.2020 14:55

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



WSP USA
RDU 11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3146281

MB Sample Id: 7717986-1-BLK

Matrix: Solid

LCS Sample Id: 7717986-1-BKS

Prep Method: SW5035A

Date Prep: 12.28.2020

LCSD Sample Id: 7717986-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0925	93	0.0948	95	70-130	2	35	mg/kg	12.29.2020 03:46	
Toluene	<0.00200	0.100	0.0859	86	0.0889	89	70-130	3	35	mg/kg	12.29.2020 03:46	
Ethylbenzene	<0.00200	0.100	0.0876	88	0.0909	91	71-129	4	35	mg/kg	12.29.2020 03:46	
m,p-Xylenes	<0.00400	0.200	0.182	91	0.188	94	70-135	3	35	mg/kg	12.29.2020 03:46	
o-Xylene	<0.00200	0.100	0.0909	91	0.0935	94	71-133	3	35	mg/kg	12.29.2020 03:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		100		104		70-130	%	12.29.2020 03:46
4-Bromofluorobenzene	119		107		109		70-130	%	12.29.2020 03:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3146281

Parent Sample Id: 681880-001

Matrix: Soil

MS Sample Id: 681880-001 S

Prep Method: SW5035A

Date Prep: 12.28.2020

MSD Sample Id: 681880-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.103	103	0.109	108	70-130	6	35	mg/kg	12.29.2020 04:31	
Toluene	<0.00200	0.0998	0.0952	95	0.0977	97	70-130	3	35	mg/kg	12.29.2020 04:31	
Ethylbenzene	<0.00200	0.0998	0.0981	98	0.104	103	71-129	6	35	mg/kg	12.29.2020 04:31	
m,p-Xylenes	<0.00399	0.200	0.199	100	0.207	102	70-135	4	35	mg/kg	12.29.2020 04:31	
o-Xylene	<0.00200	0.0998	0.0982	98	0.102	101	71-133	4	35	mg/kg	12.29.2020 04:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		70-130	%	12.29.2020 04:31
4-Bromofluorobenzene	112		110		70-130	%	12.29.2020 04:31

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



Chain of Custody

Work Order No: 1081550

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
 Phoenix, AZ (480) 365-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Project Manager: Joseph Hernandez
 Company Name: WSP USA Inc.
 Address: 3300 North A St
 City, State ZIP: Midland, TX 79705
 Phone: (281) 702-2329
 Email: joseph.hernandez@wsp.com

Bill to: (if different)
 Company Name: WSP Energy
 Address: 5315 Buena Vista Dr.
 City, State ZIP: Carlisbad, NM 88220

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

Project Name: RDV 11
 Project Number: n/a
 Project Location: Eddy County
 Sampler's Name: Anne Byers
 PO #: HRM2034258716
 Quote #: _____
 Turn Around: _____
 Routine:
 Rush: _____
 Due Date: _____

SAMPLE RECEIPT
 Temperature (°C): 12/10
 Received Intact: Yes No
 Cooler Custody Seals: Yes No
 Sample Custody Seals: Yes No
 Thermometer ID: 1-NM-007
 Correction Factor: -0.2
 Total Containers: 12

ANALYSIS REQUEST

Pres. Code	Analysis Request
	TPH (EPA 8015 Mod)
	BTEX (EPA 8021 B)
	Chloride (EPA 300.0)

Preservative Codes
 MeOH: Me
 None: NO
 HNO3: HN
 H2SO4: H2
 HCL: HL
 NaOH: Na
 Zn Acetate + NaOH: Zn

TAT starts the day received by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Analysis Request	Preservative Codes	Sample Comments
BH05		S	12/24	12:24	0.75-1'	1			
BH05			12/26	12:26	1-1.5'	1			HPLD
BH06			12/29	12:29	0.75-1'	1			
BH06			12/30	12:30	1-1.5'	1			
BH07			12/33	12:33	0.75-1'	1			
BH08			12/35	12:35	1-1.5'	1			
BH08			12/36	12:36	0.75-1'	1			
BH09			12/37	12:37	1-1.5'	1			
BH09			12/40	12:40	0.75-1'	1			
BH09			12/42	12:42	1-1.5'	1			

Total 200.7 / 6010 200.8 / 6020:
 Circle Method(s) and Metal(s) to be analyzed
 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 Ti Sn U V Zn
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti 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 Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) Ann Byers Date/Time 12-18-20 1551
 Received by: (Signature) Joe Duff Date/Time _____
 Relinquished by: (Signature) _____ Date/Time _____
 Received by: (Signature) _____ Date/Time _____



Chain of Custody

Work Order No: W 81550

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 Corsland, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 889-6701

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Page 2 of 2

Project Manager: Joseph Hernandez
Company Name: WSP USA Inc.
Address: 3388 North A St
City, State ZIP: Midland, TX 79705
Phone: (817) 382-2329
Project Name: RDU 11
Project Number: n/a
Project Location: Eddy County
Sampler's Name: Anna Byers
PO #: HRM234258716
Quote #:
Turn Around: Routine Rush:
Due Date:

Bill to: (if different) Tim Riley
Company Name: WPX Energy
Address: 5315 Buena Vista Dr.
City, State ZIP: Corsland, NM 88220
Program: UST/PST PRP Brownfields RRC Superfund
State of Project:
Reporting Level: Level II Level III PST/UST TRRP Level IV
Deliverables: EDD ADAPT Other:

Temp Blank: Yes No
Temperature (°C): 12/1.0
Received Intact: Yes No
Cooler Custody Seals: Yes No
Sample Custody Seals: Yes No
Thermometer ID: T-WM-007
Correction Factor: -0.2
Total Containers: 12
Wet Ice: Yes No

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Prep. Code	ANALYSIS REQUEST	Preservative Codes
BH15		S	12/18/19	1245	6.75-1'	1		TPH (EPA 821.5 mod)	MeOH: Me None: NO HNO3: HN H2SO4: H2 HCL: HL NaOH: Na Zn Acetate+ NaOH: Zn
BH16		S	12/18/19	1247	1-1.5'	1		BTEX (EPA 821 B) Chloride (EPA 300.0)	TAT starts the day received by the lab, if received by 4:00pm
									Sample Comments: HOLD HDLS

Total 200.7 / 6010 200.8 / 6020:
Circle Method(s) and Metal(s) to be analyzed: 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 Ti Sn U V Zn
 TCLP / SLLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U
 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature) *Anna Byers* **Received by: (Signature)** *Joe Cuffe* **Date/Time** 12.18.2015

Relinquished by: (Signature) **Received by: (Signature)** **Date/Time**

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: WSP USA

Date/ Time Received: 12.18.2020 03.51.00 PM

Work Order #: 681880

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T_NM_007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6*Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	Samples received in bulk containers.
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 12.18.2020
Cloe Clifton

Checklist reviewed by: Jessica Kramer Date: 12.28.2020
Jessica Kramer

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 45626

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 45626
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	WPX's deferral requests to defer the remaining residual impacts within the tank battery earthen containment during any future major deconstruction/alteration and/or abandonment, whichever occurs first. The areas requested for deferral is identified on the site map as "FS02", "FS04", "FS05", "FS06", and "FS07". The areas have been delineated and documented in the report. At this time, OCD approves the request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue. This is a Federal site and will require like approval from BLM.	1/13/2022