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

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NRM2017643736
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC.					OGRID: 246289				
Contact Name: Lynda Laumbach					Contact Telephone: (575) 725-1647				
Contact ema	il: Lynda.La	umbach@wpxene	ergy.com		Incident #	(assigned by OCD) NRM2017643736			
Contact mail	ing address:	5315 Buena Vist	a Drive, Carlsba	d, NM 88	3220				
			Locatio	n of R	elease S	ource			
Latitude 3	2.049734		(NAD 83 in	decimal deş	Longitude grees to 5 decir	-103.9102662 mal places)			
Site Name: R	DX 17 Fede	ral #36H			Site Type:	Production Facility			
Date Release	Discovered:	06/16/2020			API# (if app	plicable): 30-015-43636			
Unit Letter	Section	Township	Range		County				
D	17	26S	30E	Eddy	Eddy				
☐ Crude Oil		l(s) Released (Select a				Release justification for the volumes provided below) Volume Recovered (bbls):			
			. ,			` /			
X Produced	Water	Volume Release				Volume Recovered (bbls): 22			
Is the concentration of dissolved chloric produced water >10,000 mg/l?		d chloride	in the	☐ Yes ☐ No					
Condensate Volume Released (bbls)					Volume Recovered (bbls)				
☐ Natural Gas Volume Released (Mcf)					Volume Recovered (Mcf)				
Other (describe) Volume/Weight Released (provide unit		ide units)	ı	Volume/Weight Recovered (provide units)					
			ng 22bbl of proc	duced wat	ter to be rele	eased into the lined secondary containment. All fluids			

Received by OCD: 6/2/2021/12:00:24 AM State of New Mexico
Page 2 Oil Conservation Division

D	nB	e 2	an	F:	10	n
	ug	er ze	coj	9	4	U

Incident ID	NRM2017643736
District RP	
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Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the respon	sible party consider this a major release?
☐ Yes ☒ No		
If YES, was immediate no	btice given to the OCD? By whom? To wh	om? When and by what means (phone, email, etc)?
	Initial Re	esponse
The responsible p	party must undertake the following actions immediately	unless they could create a safety hazard that would result in injury
X The source of the rele	ease has been stopped.	
X The impacted area ha	s been secured to protect human health and	the environment.
X Released materials ha	we been contained via the use of berms or d	ikes, absorbent pads, or other containment devices.
X All free liquids and re	ecoverable materials have been removed and	managed appropriately.
D. 10 15 20 0 D. (A) NM		
has begun, please attach a	a narrative of actions to date. If remedial	emediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred lease attach all information needed for closure evaluation.
regulations all operators are public health or the environment failed to adequately investigation	required to report and/or file certain release notified. The acceptance of a C-141 report by the Oate and remediate contamination that pose a threatening that pose as threatening that pose as the contamination of the post	test of my knowledge and understand that pursuant to OCD rules and ications and perform corrective actions for releases which may endanger CD does not relieve the operator of liability should their operations have at to groundwater, surface water, human health or the environment. In esponsibility for compliance with any other federal, state, or local laws
Printed Name: Lyno	da Laumbach	Title: Environmental Specialist
Signature:	Samback	Date: <u>06/25/2020</u>
email: Lynda.Laumbacl	h@wpxenergy.com	Telephone: (575)725-1647
OCD Only		
Received by:Ramona	Marcus	Date: 6/26/2020

Page 3 of 190
Incident ID NDM2017643736

Incident ID	NRM2017643736
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)			
Did this release impact groundwater or surface water?	☐ Yes ☑ No			
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No			
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No			
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No			
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No			
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No			
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No			
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No			
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No			
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No			
Are the lateral extents of the release within a 100-year floodplain?				
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☑ No			
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil			
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 well Field data	ls.			
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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Page 4 Oil Conservation Division

	Page 4 of 19	90
Incident ID	NRM2017643736	
District RP		
Facility ID		
Application ID		

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Incident ID NRM2017643736

District RP
Facility ID
Application ID

Remediation Plan

Remediation Plan Checklist: Each of the following items must be	e 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 con	nfirmed 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	n, the environment, or groundwater.					
	e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of					
Printed Name: Lynda Laumbach	Title: Environmental Specialist					
Signature: fpsls tombach	Date: 06/01/2021					
email: lynda.laumbach@wpxenergy.com	Telephone: 575-725-1647					
OCD Only						
Received by:	Date:					
Approved	Approval					
Signature:	Date:					

<u>District I</u> 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

NM OIL CONSERVATION

State of New Mexico ARTESIA DISTRICT **Energy Minerals and Natural Resources**

Form C-141 Revised August 8, 2011

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

MAY 0.5 2017 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action												
	7129	52339	}			OPERA'		\boxtimes	Initi	al Report		Final Report
Name of Co Address		WPX Energiena Vista D		I 24628		Contact	Karolina Blar		<u>.</u>			
Facility Nar			r			Facility Typ	No. 970 589 074 e: Well Pad	+3		<u></u>	—	
				110					ADI M	20 015 4	1664	
Surface Ow	ner: Fede	rai		Mineral C)wner: 1	rederal			API NO	<u>. 30- 015-4</u>	1004	<u> </u>
						OF RE	LEASE	·				
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/Wes	st Line	County		
D	17	26S	30E	150		FNL	682	FW	L	Eddy		
			La	titude: 32.0492 NAT		Longitud OF REL		77W				
Type of Rele		ed Water				Volume of	Release: 11 Bbl:			e Recovered		
Source of Re Flowline			···		<u></u>	5/2/2017	lour of Occurrenc	ce		nd Hour of I 17 – 11:00 h		
Was Immedia	ate Notice (Yes [No 🛛 Not R	equired	If YES, To NMOCD (Whom? Crystal Weaver &	Michael B	ratcher,	BLM Shelly	y Tuc	ker
By Whom? I							lour: 5/3/17- 12:4					
Was a Water	course Read		Yes ⊠] No		If YES, Vo	olume Impacting t	the Waterc	ourse.			
If a Watercou	ırse was Im	pacted, Descr	ibe Fully.	* N/A		1						
The cause v	Describe Cause of Problem and Remedial Action Taken.* The cause was equipment failure. A flowline corroded and allowed produced water to spill into lined SPCC containment. There was a hole in the liner, right next to a hammer union, and approximately 5 bbls of water was spilled onto an access road. This spill did not impact any vegetation.											
Describe Are	a Affected	and Cleanup	Action Tal	ken.*								
OCD Guidel	The impacted area was mapped with a Trimble and will be scraped off. The area will be sampled for BTEX, TPH, and chlorides in accordance with NM OCD Guidelines for Remediation of Leaks, Spills, and Releases. Further remediation will be based on these results.											
regulations a public health should their or the enviro	I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.											
	Karolino	Blaney					OIL CON	SERVA	TION	DIVISIO	<u>N</u>	
Signature:		0				Approved by	Environmental S	Specialis	IL R	40/1	۸	6.
Printed Nam	e: Karolina	Blaney							ML)WX		<u>~</u>
Title: Enviro	onmental Sp	pecialist				Approval Da	te: 5/8 17	Ex	piration	Date: N/	A_	
E-mail Addr	ess: Karoli	na.blaney@w	pxenergy.	com		Conditions o	•••	۔ اہ	1	Attached	X	
Date: 5/4/2	017		Phone	: 970-589-0743		see	atta	che	O		٠,	
* Attach Addi	tional She	ets If Necess								2RP-	41	98

NAB1712952339 Incident ID District RP 2RP-4198 Facility ID

Application ID

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas not on an exploration, development, production, or storage site?	✓ Yes ☐ No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics	tical extents of soil

com	amination associated with the release have been determined. Refer to 19.13.29.11 NMAC for specifics.
<u>Ch</u>	aracterization Report Checklist: Each of the following items must be included in the report.
NNN	
\square	Depth to water determination
	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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Incident ID	NAB1712952339
District RP	2RP-4198
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the Gailed to adequately investigate and remediate contamination that pose a threaddition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	DCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In
Printed Name: Lynda Laumbach	Title: Environmental Specialist
Printed Name: Lynda Laumbach Signature: Lynda Laumbach	Date:
email: lynda.laumbach@wpxenergy.com	Telephone: <u>575-725-1647</u>
OCD Only	
Received by:	Date:

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Incident ID	NAB1712952339
District RP	2RP-4198
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: Each of the following items must be	e included in the plan.
 ✓ Detailed description of proposed remediation technique ✓ Scaled sitemap with GPS coordinates showing delineation point ✓ Estimated volume of material to be remediated ✓ Closure criteria is to Table 1 specifications subject to 19.15.29.1 ✓ Proposed schedule for remediation (note if remediation plan times) 	2(C)(4) NMAC
Deferral Requests Only: Each of the following items must be con	firmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around pr deconstruction.	oduction equipment where remediation could cause a major facility
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 complet rules and regulations all operators are required to report and/or file c which may endanger public health or the environment. The accepta liability should their operations have failed to adequately investigate surface water, human health or the environment. In addition, OCD a responsibility for compliance with any other federal, state, or local limits of the compliance with any other federal.	rertain release notifications and perform corrective actions for releases nee of a C-141 report by the OCD does not relieve the operator of and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of
Printed Name: Lynda Laumbach	Title: Environmental Specialist
Printed Name: Lynda Laumbach Signature:	Date:06/01/2021
email: _lynda.laumbach@wpxenergy.com	Telephone: 575-725-1647
OCD Only	
Received by:	Date:
☐ Approved ☐ Approved with Attached Conditions of	Approval
Signature:	Date:



WSP USA

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

June 1, 2021

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

Re: Remediation Work Plan

RDX 17 Federal #36H/RDX 17-25

Incident Number NRM2017643736 and NAB1712952339

Eddy County, New Mexico

To Whom it May Concern:

WSP USA Inc. (WSP) (formerly LT Environmental, Inc.), on behalf of WPX Energy Permian, LLC. (WPX), presents the following Remediation Work Plan detailing site assessment and sampling activities completed to date and proposing actions to address impacted soil resulting from two releases of produced water at the RDX 17 (Site). The Site is located in Unit D, Section 17, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1). Based on field observations, field screening activities, and laboratory analytical results from soil sampling activities, WPX is submitting this Remediation Work Plan, describing sampling activities that have occurred and proposing additional remediation activities.

RELEASE BACKGROUND

Incident Number NRM2017643736

On June 16, 2020, a pinhole developed on a water line causing approximately 22 barrels (bbls) of produced water into a lined secondary containment. The fluids were recovered, and a subsequent visual inspection of liner integrity determined the liner was not in working condition. WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on June 25, 2020 and was subsequently assigned Incident Number NRM2017643736.

Incident Number NAB1712952339

On May 2, 2017, a corroded flowline resulted in the release of approximately 11 barrels (bbls) of produced water into a lined containment. A breach next to a hammer union allowed approximately 5 bbls to escape the containment, flowing into the pasture, onto an adjacent access road, and pipeline right-of-way. A hydro-vacuum truck was dispatched to the Site to recover free liquids. Approximately 6 bbls of produced water were recovered. WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and



Corrective Action Form C-141 (Form C-141) on May 5, 2017 and was subsequently assigned Incident Number NAB1712952339.

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on Form C-141, Site Assessment/Characterization Form. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based a boring that was drilled by WPX on December 8, 2020, located approximately 0.4 miles east of the Site. Using a truck mounted drill rig equipped with hollow stem auger, the soil boring was advanced to a total depth of 110 feet bgs. No water was observed within the soil boring after at least 72 hours and the boring was plugged and abandoned. The boring log is included as Attachment 1.

CLOSURE CRITERIA

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

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

Additionally, the top four feet of reclaimed surface in the affected pasture must be comprised of non-waste containing, uncontaminated earthen material exhibiting chloride concentrations below 600 mg/kg, which was applied per NMAC 19.15.29.13.D (1), or natural background chloride concentrations if they exceed 600 mg/kg. A reclamation standard of 100 mg/kg of TPH was also applied to the affected pasture.

DELINEATION SOIL SAMPLING ACTIVITIES

Incident Number NAB1712952339

On August 27, 2020, WSP conducted Site assessment and delineation soil sampling activities. Six potholes (PH01 through PH06) were advanced via heavy equipment within the release extent as described on the Form C-141 to confirm the presence or absence of impact to soil at depth.



Delineation soil samples were collected at depths ranging from approximately 1 foot to 6 feet bgs. At least three discrete soil samples, which included the highest field screening result and the terminus, were collected from the potholes based on field screening results for volatile aromatic hydrocarbons and chloride. Soil samples were screened for volatile aromatic hydrocarbons and chloride using a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The lithologic/soil sampling logs for the boreholes are included in Attachment 2. Soil sample locations are depicted on Figure 2. Photographic documentation during assessment and delineation activities is provided in Attachment 3.

Incident Number NRM2017643736 and NAB1712952339

On October 29, 2020, WSP utilized a Shaw Tool, Ltd Portable Core Drill to install two corehole delineation points (CH01 and CH02) to determine the vertical extent of impact within the documented breached liner area to confirm vertical delineation of any impacts to soil under the containment. The coreholes were advanced to depths ranging from 6 feet to 8.5 feet bgs. Corehole soil samples were field screened, at minimum, every 2-foot interval for volatile aromatic hydrocarbons and chloride utilizing a calibrated PID and Hach® chloride QuanTab® test strips. Soil samples from CH01 and CH02 were collected from the soil interval with the highest field screening result and the terminus of the corehole. Field screening results and observations for each delineation soil sample were recorded on lithologic/soil sampling logs which are included in Attachment 2. The corehole soil sample locations are presented on Figure 2. The breached area within the lined containment was bonded and repaired by WPX in an effort to restore the integrity of the liner.

SOIL COLLECTION METHOD AND ANALYTICAL RESULTS

Each soil sample was placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The samples were transported to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-ORO by EPA Method 8015M/D, and chloride by EPA Method 300.0.

Laboratory analytical results for the potholes indicated that benzene, BTEX, TPH-GRO/TPH-DRO and TPH concentrations were compliant with the Closure Criteria and reclamation criteria in all delineation soil samples. Laboratory analytical results potholes indicated that chloride concentrations exceeded the reclamation criteria in delineation soil samples PH01, PH01A, PH02, PH02A, PH03A and PH06A. Laboratory analytical results for the corehole soil samples CH01 and CH02 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH and chloride concentrations were compliant with the Closure Criteria. Furthermore, off-pad impacts are delineated vertically and laterally to the east by corehole soil samples CH01 and CH02. The laboratory analytical results are summarized on Table 1 and laboratory analytical reports are included in Attachment 4.



PROPOSED WORK PLAN

Because PH06 contained chloride concentrations exceeding 600 mg/kg and was positioned outside of the release footprint, WPX proposes to investigate naturally occurring background concentrations for chloride. The background sampling area will continue to be no closer than 50 feet but no farther than 100 feet from the lateral and horizontal extent of the release. Laboratory analytical results of the chloride background concentrations may be used drive remediation and continued delineation efforts if concentrations are consistent within the background buffer or greater than the reclamation chloride concentration limit of 600 mg/kg. Figure 3 represents the background sampling area buffer that WPX will investigate.

If chloride background levels are consistently less than the 600 mg/kg for chloride, WPX will use the reclamation criteria off pad. If the reclamation standard is applied, WPX estimates up to 1,332 cubic yards of impacted soil exists at the Site within the top 4 feet of the subsurface. Due to the nature of the release (produced water containing chloride) and chloride impacts to approximately 4 feet bgs, WSP proposes excavation of the top 4 feet of the subsurface to the maximum extent allowed based on presence of active pipeline infrastructure. WSP will oversee excavation activities to remediate impacted soil as indicated by visual observations, field screening results, and depths consistent with delineation laboratory analytical results. ISoil will be excavated pursuant to NMAC 19.15.29 to ensure extent of the contaminated soils above Table I thresholds has been identified and removed. Excavated soil will then be transferred to (a) a New Mexico approved landfill facility for disposal or (b) an on-site, lined treatment cell. Non-waste containing soil, as defined by "Procedures for Implementation of the Spill Rule" (September 6, 2019), will then be used to backfill the excavation. If the on-site treatment is selected, non-waste containing soils will be treated soils with each confirmation sample testing below the most protective concentrations in Table I of 19.15.29.12 NMAC and representing no more than 100 cubic yards. Samples pulled from the treatment cell will be from the bottom 12" of the soil and evenly spaced in a grid like pattern.

Remediation associated with Incident Number NAB1712952339 will be completed through excavation of all remaining impacted soil within the release footprint and near PH06 containing chloride concentrations above the observed background concentrations or reclamation standard for the top four feet.

Additional lateral delineation is required for the release associated with Incident Number NRM2017643736 to confirm the release did not impact areas north, east, and south outside of the containment. Delineation activities will be performed simultaneously with excavation activities. If laboratory analytical results from additional delineation soil samples are compliant with the Closure Criteria or background concentrations, WPX will proceed with a closure request for Incident Number NRM2017643736.

PROPOSED SAMPLING

WPX is requesting a variance to the 200 square foot confirmation sampling requirement for the areas to be excavated, which would require an estimated 35 floor samples within the release extent, excluding sidewall samples.



Due to the large extent of the impacted area, WPX proposes increasing the confirmation sampling size to collecting a 5-point composite sample to represent each 500 square foot area. An estimated 14 confirmation samples will be collected from the excavation floor following the completion of remediation activities. Figure 4 illustrates the proposed sampling grids overlaying the representative excavation boundary, which assumes the entirety of the release footprint may need to be addressed. Each square in the grid represents a 500 square foot composite sampling area. Figure 4 does not illustrate sidewall sample locations, which will also be collected to represent 500 square feet sampling areas.

PROPOSED SCHEDULE

WPX will complete the additional proposed remediation activities and provide a follow-up report detailing all remediation activities and a request for closure or deferral within 90 days of the date of approval of this work plan by NMOCD.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Sincerely,

WSP USA Inc.

Joseph Hernandez

Associate Consultant, Geologist

syn S. Holy.

Ashley L. Ager, P.G.

Ashley L. Ager

Managing Director, Geologist

cc: Lynda Laumbach, WPX

Robert Hamlet, NMOCD Victoria Venegas, NMOCD

Jim Amos, Bureau of Land Management

Attachments:

Figure 1 Site Location Map

Figure 2 Delineation Soil Sample Locations

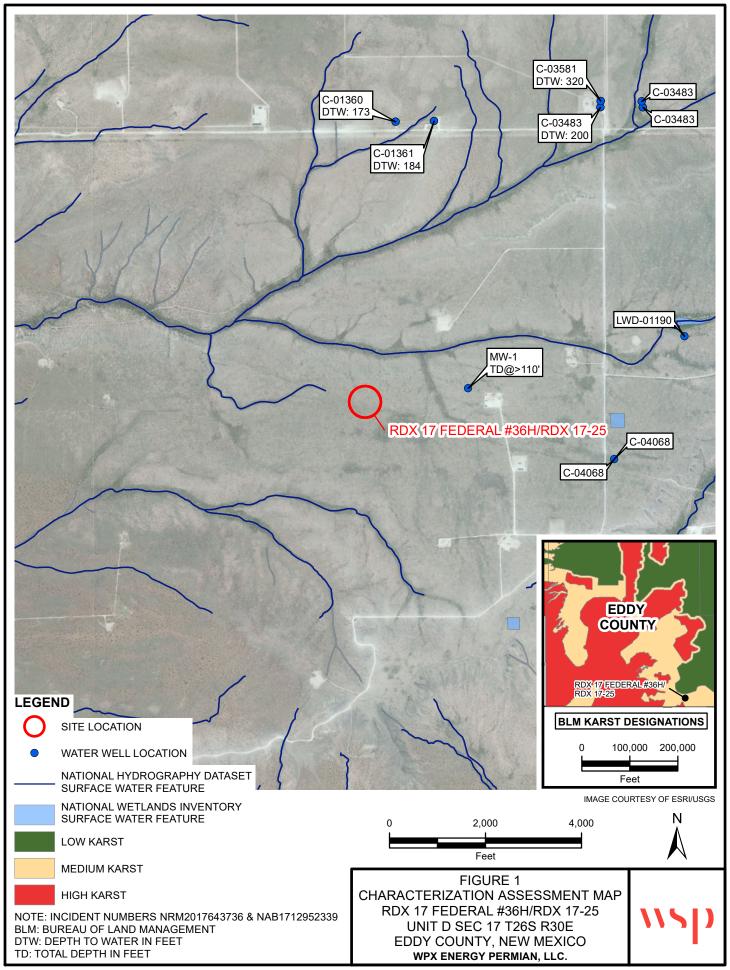
Figure 3 Buffer Sampling Area
Figure 4 Proposed Sampling Area
Table 1 Soil Analytical Results

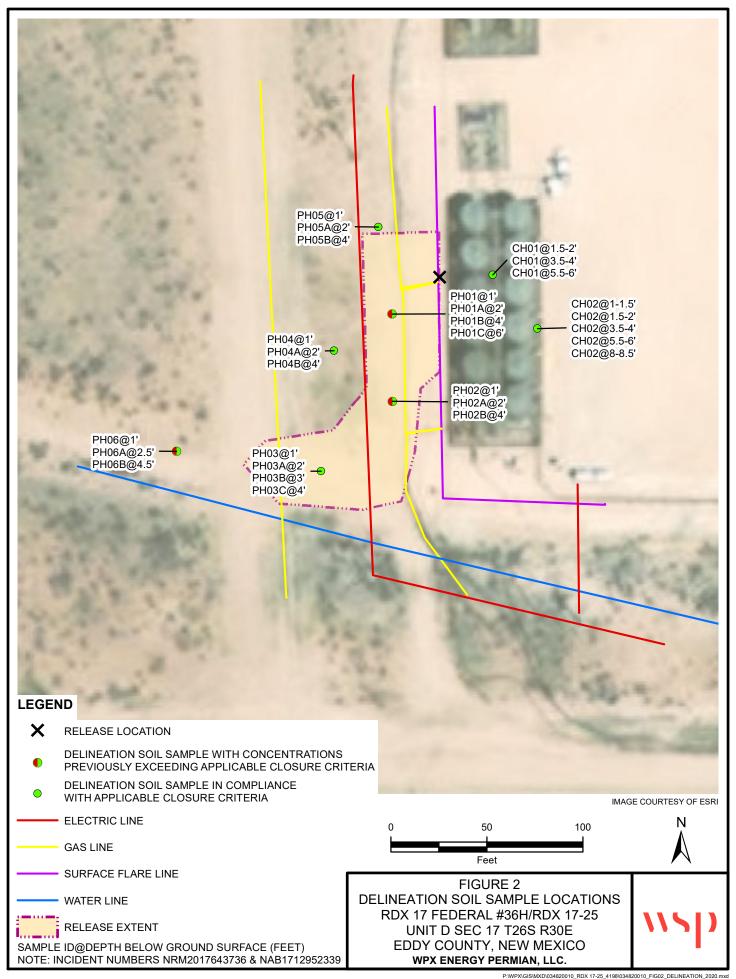
Attachment 1 Boring Log

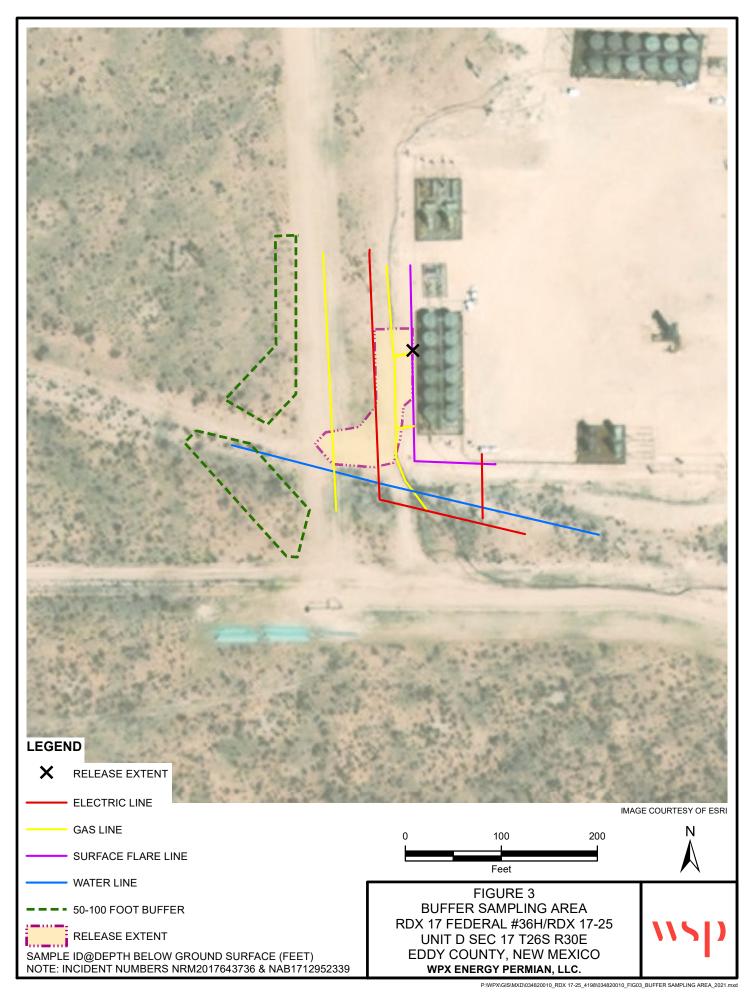
Attachment 2 Lithologic/Sampling Log

Attachment 3 Photographic Log

Attachment 4 Laboratory Analytical Reports







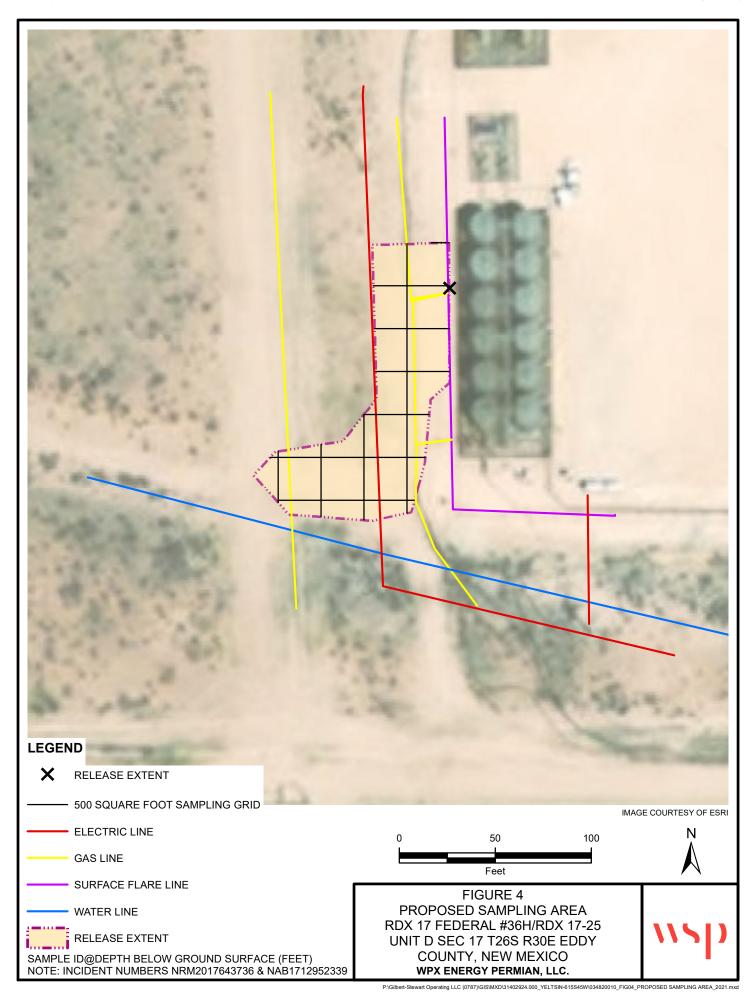


Table 1

Soil Analytical Results RDX 17 Federal #36H/RDX 17-25 Incident Number NRM2017643736 and NAB17129523392 Eddy County, New Mexico

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
Delineation Samp	les									
PH01	08/27/2020	1	< 0.00198	< 0.00198	<50.0	<50.0	<50.0	<50.0	< 50.0	12,300*
PH01A	08/27/2020	2	< 0.00200	< 0.00200	<50.1	<50.1	<50.1	<50.1	< 50.1	3,750*
PH01B	08/27/2020	4	< 0.00200	< 0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	3,720
PH01C	08/27/2020	6	< 0.00198	< 0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	6,480
PH02	08/27/2020	1	< 0.00199	< 0.00199	<49.9	69.5	<49.9	69.5	69.5	2,820*
PH02A	08/27/2020	2	< 0.00199	< 0.00199	<50.1	<50.1	<50.1	<50.1	< 50.1	17,700*
PH02B	08/27/2020	4	< 0.00200	< 0.00200	<50.0	<50.0	<50.0	<50.0	< 50.0	3,180
PH03	08/27/2020	1	< 0.00200	< 0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,890*
PH03A	08/27/2020	2	< 0.00202	< 0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	1,180*
РН03В	08/27/2020	3	< 0.00201	< 0.00201	<50.0	<50.0	<50.0	<50.0	< 50.0	512
PH03C	08/27/2020	4	< 0.00198	< 0.00198	<50.1	<50.1	<50.1	<50.1	< 50.1	227
PH04	08/27/2020	1	< 0.00200	< 0.00200	<50.0	<50.0	<50.0	<50.0	< 50.0	55.4
PH04A	08/27/2020	2	< 0.00200	< 0.00200	<50.0	<50.0	<50.0	<50.0	< 50.0	23.1
PH04B	08/27/2020	4	< 0.00198	< 0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	<9.92
PH05	08/27/2020	1	< 0.00198	< 0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	53.5
PH05A	08/27/2020	2	< 0.00200	< 0.00200	<50.1	<50.1	<50.1	<50.1	< 50.1	16.1
PH05B	08/27/2020	4	< 0.00199	< 0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	18.0
PH06	08/27/2020	1	< 0.00200	< 0.00200	<50.2	<50.2	<50.2	<50.2	< 50.2	483
PH06A	08/27/2020	2.5	< 0.00202	< 0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	1,200*
РН06В	08/27/2020	4.5	< 0.00201	< 0.00201	<50.0	<50.0	<50.0	<50.0	< 50.0	969

Table 1

Soil Analytical Results RDX 17 Federal #36H/RDX 17-25 Incident Number NRM2017643736 and NAB17129523392 Eddy County, New Mexico

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
CH01	10/29/2020	1.5 - 2	< 0.00201	< 0.00201	<50.1	79.6	<50.1	79.6	79.6	344
CH01	10/29/2020	3.5 - 4	< 0.00200	< 0.00200	<13.9	16.3	<11.5	16.3	16.3	3,230
CH01	10/29/2020	5.5 - 6	< 0.00202	< 0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	606
CH02	10/29/2020	1 - 1.5	< 0.00201	0.107	<50.2	<50.2	<50.2	<50.2	<50.2	342
CH02	10/29/2020	1.5 - 2	< 0.0196	0.594	88.2	748	59.4	896	896	660
CH02	10/29/2020	3.5 - 4	< 0.00202	0.647	60.4	298	<50.2	358	358	212
CH02	10/29/2020	5.5 - 6	< 0.00200	< 0.00200	<50.2	99.0	<50.2	99.0	99.0	148
CH02	10/29/2020	8 - 8.5	< 0.00202	< 0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	157

Notes:

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

GRO - gasoline range organics

DRO - diesel range organics

ORO - oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

NE - Not Established

< - indicates result is less than the stated laboratory method practical quantitation limit

BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard

 $\ensuremath{^*}$ - indicates sample was collected in area to be reclaimed after remediation is complete;

closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg

		HR	ı						MONITORING WI	ELL COMPLETION	DIAGRAN	М
/				IAN	CE		Boring/Well 1		W-1	Location: RDX Federal Co	om 17 44H	
			ווו וו		NC		Date:	171 (VV - 1	Client:	JIII 1 / - 4 4 11	
	TM	3 0			11 3		Logged By:	12/8/	/2020	WPX Energy		
Drilling Me										Drilled By:		
	Air Rotar	У	C 1D		one		G 175	J. Lin	n, PG	Talon L	PE	
Gravel Pacl	k Type: 0/20 San	ıd	Gravel Pac	k Depth Inte	ags		Seal Type:	one	Seal Depth Interval: None	Latitude: 32.0496	56	
Casing Typ		Diameter:		Depth Inter	val:			Depth (ft. BGS		Longitude:	130	
PVC		2-inch		0-105 ft				11	10	-103.904	054	
Screen Typ	e:	Slot:		Diameter:		Interval:	Well Total D	epth (ft. BGS):		Depth to Water (ft. BTOC):		
PVC	.	0.010-ii	ıch	2-inch	105 -	110 ft		11	10	> 110	12/16/202	20
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Litholog	y/Remarks	Well Completic	on
0 5 10 15 20 25 30 35 40	NM	L	D	N	N	NM	CE	NS	Buff to pale pin	k colored caliche	- - - - -	
45 50 55 60	NM	L	D	N	N	NM	SW	NS		l graded sand with or silt		
65 70 75	NM	L	D	N	N	NM	SP	NS	Pinky pale brown orange poorly graded fine sand with minor silt			
80 85 90	NM	L	D	N	N	NM	SW-SM SW-SC	NS	Pinky brown orange well-graded sand with silt and clay			
95 100 105	NM	L	D	N	N	NM	SP	NS	Pinky pale brown orange poorly graded fine sand with minor silt - TD: 110' bgs -			

	\\ ') OLO(E Car GIC / SOIL	508 West States	w Mexico	88220	Pothole Name: PH01 8/27/2020 Site Name: RDX 17 Federal #36H/RDX 17-25 Incident Number: NRM2017643736 and NAB1712952339 WSP Job Number: TE034820010 Logged By: Anna Byers Method: Back Hoe
Lat/Lo 32.048	ong: 883063N, 1	103.9110	5389W		Field Scree Chloride	ening:		Hole Diameter: Total Depth: Not applicable 8 feet
				-				o distilled water. Values reported do not include a correction factor.
Moisture Rough Content Log	Content Conten							Lithology/Remarks
Dry	9,668	NA NA	No No	PH01 PH01A	1 _	0 - - 1 - - - - 2		brown, poorly-graded sand (f.) with gravel to cobble sized grains with no plasticity or odor, including root fragments light brown to tan colored caliche; moderately cemented sand (f.) with gravel to cobble sized inclusions; odorless; cementation decreases with depth
Dry	8,228	NA	No		3		cche	
Dry	7,604	NA	No	PH01B	4	<u> </u>	cche	
Dry	>2,464	NA	No		5	5 	cche	
Dry	>2,464	NA	No	PH01C	6	6 - -	cche	
Dry	2,208	NA	No		7.5	7.5	cche	well-cemented caliche shelf; increased finer grains
Dry	1,424	NA	No		8	8 Tota		well-cemented caliche shelf Back Hoe Refusal

									Pothole Name:	Date:
					WS	P USA			PH02	8/27/2020
,				Ę	508 West S	Stevens S	Street		Site Name: RDX 17 Feder	ral #36H/RDX 17-25
				Cai	Isbad, Nev	w Mexico	88220		Incident Number: NRM20	17643736 and NAB1712952339
								WSP Job Number: TE034	1820010	
		LITH	OLOG	SIC / SOIL	SAMPL	ING LO	Logged By: Anna Byers	Method: Back Hoe		
Lat/Lo	•				Field Scree	ening:			Hole Diameter:	Total Depth:
	70579N, 1			ing was sand	Chloride	1.1 dilutia	n of ooil t	a diatillad w	Not applicable	7.25 feet ot include a correction factor.
				•					· ·	of include a correction factor. Closure Criteria for all initial soil samples.
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol			logy/Remarks
					_	0				
Dry	9,668	NA	No	PH02	1 _	- - - 1	SP-SM	with no p	plasticity or odor, inclu) with gravel to cobble sized grains uding root fragments che; moderately cemented sand (f.)
Dry	4,392	NA	No	PH02A	2	2	cche	with grav	rel to cobble sized inc tion decreases with c	clusions; odorless;
Dry	2,652	NA	No		3	<u> </u>	cche			
Dry	3,160	NA	No	PH02B	4	4	cche			
Dry	-	- NA No 5 - 5 cche								
Dry	ry 232 NA No 6 - 6 cche									
Dry	820	NA	No		7.25	7.25 Tota			ented caliche shelf; i Refusal	ncreased finer grains

	\\'	51)		WS 508 West S rlsbad, Ne			Pothole Name: PH03 Site Name: RDX 17 Fede Incident Number: NRM20 WSP Job Number: TE034	eral #36H/ 01764373	
		LITH	OLO	GIC / SOII	LSAMPL	ING LO	Logged By: Anna Byers		Method: Back Hoe	
	3606184N,				Field Scree Chloride			Hole Diameter: Not applicable		Total Depth: 4 feet
				•				ater. Values reported do n d TPH concentrations belov		e a correction factor. Criteria for all initial soil samples.
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Litho	ology/Re	emarks
Dry	824	0 brown						oorly-graded sand (f lasticity or odor, incl		gravel to cobble sized grains oot fragments
Dry	1,024	NA	No	PH03	2	2	SP-SM			
Dry	<112	NA	No	PH03B	3 _	3 	SP-SM			
Dry	~120	NΙΛ	No	DHUSC			SD SM			

SP-SM Total Depth

									Pothole Name:		Date:		
7			7		WS	P USA		PH04		8/27/2020			
'				5	508 West S	Stevens S	Street		Site Name: RDX 17 Federal #36H/RDX 17-25				
				Cai	Isbad, Ne	w Mexico	88220		Incident Number: NRM2017643736 and NAB1712952339				
									WSP Job Number: TE034820010				
		LITH	OLO	SIC / SOIL	SAMPL	ING LO	G		Logged By: Anna Byers		Method: Back Hoe		
Lat/Lo		100 0444	- 4 0 4 1 4 4		Field Scree	ening:			Hole Diameter:		Total Depth:		
	877848N, 1			ing was cond	Chloride	a 1:4 dilutio	on of soil t	o distilled w	Not applicable ater. Values reported do r		7.75 feet		
											Criteria for all initial soil samples.		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks					
Dry	<112	NA	No	PH04	1 _	0 - 1 - 1		with no p	oorly-graded sand (f lasticity or odor, incl		gravel to cobble sized grains oot fragments		
Dry	<112	NA NA	No No	PH04A	2 <u>-</u> - 3 <u>-</u>	2 - - 3	SP-SM						
Dry	<120	NA	No	PH04B	4	- 4 	SP-SM	light brown to tan colored caliche; poorly cemented sand (f.) with gravel to cobble sized inclusions; odorless; cementation decreases with depth					
Dry	<120	NA	No		6	6 - - - -	cche						
Dry	<120	NA	No		7.75	7.75		well-cem tal Depth	ented caliche shelf;	increas	ed finer grains		

	11	5)	Ca	WS 508 West S rlsbad, Nev	SP USA Stevens S w Mexico	Street 88220	P S	othole Name: H05 ite Name: RDX 17 I ncident Number: NR		Date: 8/27/2020 //RDX 17-25 36 and NAB1712952339			
								V	/SP Job Number: T	E034820010				
		LITH	OLO	GIC / SOII			G		ogged By: Anna By		Method: Back Hoe			
Lat/Lot	ng: 395548N, 1	103 0110 [.]	7643\W	ı	Field Scree	ening:			ole Diameter: ot applicable		Total Depth:			
					Chloride ducted with a	a 1:4 diluti	on of soil t				8 feet le a correction factor.			
											Criteria for all initial soil samples.			
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bgs)			Lithology/Remarks					
_ 0 _														
Dry	<120	NA	No	PH05	1	1			orly-graded san asticity or odor,		gravel to cobble sized grains oot fragments			
Dry	<120	NA	No	PH05A	2			with grave	n to tan colored Il to cobble size on decreases w	d inclusion	oderately cemented sand (f.) s; odorless;			
Dry	<120	NA	No		3	_ _ _ _	cche							
Dry	<120	NA	No	PH05B	4	4 4	cche							
					- - - -	5 5								
Dry	<120	NA	No		6	6 	cche	е						
_ 7														
			'		-	_ ' _	ľ							
Dry	188	NA	No	<u> </u>	8	8	cche	consolidat	ed caliche; incr	ease of fin	er sand grains			
							101	tal Depth						

Released to Imaging: 9/1/2021 1:43:14 PM

Comm	865400N, 1	103.9114 oride field	3600W screen	GIC / SOII	508 West Salsbad, Ne SAMPL Field Scree Chloride lucted with a	ING LOCening:	88220	Pothole Name: PH06 Site Name: RDX 17 Federal #36H/RDX 17-25 Incident Number: NRM2017643736 and NAB1712952339 WSP Job Number: TE034820010 Logged By: Anna Byers Hole Diameter: Not applicable to distilled water. Values reported do not include a correction factor.			
Moisture Content Chloride (ppm) Vapor Vapor (ppm) Staining Sample #					Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	ed BTEX and TPH concentrations below Closure Criteria for all initial soil samples. Lithology/Remarks			
Dry	232	NA	No	PH06	1 _	0 - - - 1 -	cche	light brown to tan colored caliche; moderately cemented sand (f.) with gravel to cobble sized inclusions; odorless; cementation decreases with depth			
Dry	1,424	NA	No	PH06A	2.5	2.5	cche				
Dry	1,024	NA	No		3	3	cche				
Dry	844	NA	No	PH06B	4.5	- - - - - 4.5	cche				
Dry	232	NA	No		6	6	cche				
	Total Depth										

CH01

CH01

Dry

Dry

224

364

NA

NA

No

No

	\\ '			Car	WSP USA 508 West Stevens Street trlsbad, New Mexico 88220				Pothole Name: Date: CH01		
		LITH	OLO	GIC / SOIL	-	Logged By: Anna Byers	Method: Shaw Core Drill				
	888628N,				Field Screening: Chloride				Hole Diameter: Not applicable	Total Depth: 6 feet	
				•					•	not include a correction factor. v Closure Criteria for all initial soil sam	oles.
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
Dry	1,740	NA	No	CH01	1 _	_ 0	cche		decreasing cemental d (c.), moist, no odor	ion with depth, tan colored, g	ravel

Total Depth

(c.), moist, light brown, no odor

cche Caliche, poorly cemented, tan gravel and sand (c.)

SP

	11)	Cai	508 West S Isbad, Ne	WSP USA West Stevens Street ad, New Mexico 88220 AMPLING LOG			Pothole Name: Date: CH02 10/29/2020 Site Name: RDX 17 Federal #36H/RDX 17-25 Incident Number: NRM2017643736 and NAB1712952339 WSP Job Number: TE034820010 Logged By: Anna Byers Method: Shaw Core Drill		
Lat/Lo	ng:		0200	7.001.	Field Screening:				Hole Diameter:	Total De	
32.048	880899N, 1				Chloride				Not applicable	8.5 feet	
				-					ater. Values reported do not		
Moisture Content	Content Chloride (NA), because the Content Chloride (ppm) (ppm) Staining Sample #				Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
Dry Dry	224 516	NA NA	No No	CH02 CH02	0 _	0 1 1 2	cche cche	caliche, v	vell consolidated, grav	vel poorly so	orted, no odor
Dry	316	NA	No	CH02	3 _	3 - 4	SP	(c.), light	brown, mild odor		
Dry	148	NA	No	CH02	5 <u> </u>	5 - 6 - 7	SP	(c.), light	brown, less odor		
Dry	120	NA	No	CH02	8	8 8		caliche, ı	mod. cemented, no od	lor	



PHOTOGRAPHIC LOG								
WPX Energy Permian,	RDX 17 Federal #36H/RDX 17-25	TE034820010						
LLC.	Eddy County, New Mexico							

Photo No. Date
1 August 27, 2020

North view of the release area

before delineation activities.

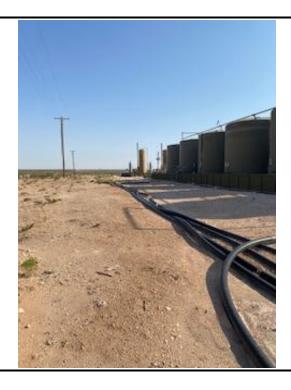


Photo No. Date

2 August 27, 2020

South view of the release area.

South view of the release area before delineation activities.





PHOTOGRAPHIC LOG								
WPX Energy Permian,	RDX 17 Federal #36H/RDX 17-25	TE034820010						
LLC.	Eddy County, New Mexico							

Photo No. Date

3 August 27, 2020

East view of the release area before delineation activities.



Photo No.Date4August 27, 2020Southwest view of the Site during

delineation activities.





Certificate of Analysis Summary 671316 WSP USA, Dallas, TX

Project Name: RDX 17-25

Project Id:

Project Location:

Contact:

034820010

Chris McKisson

Eddy County

Date Received in Lab: Fri 08.28.2020 14:08

Report Date: 01.12.2021 16:10

Project Manager: Jessica Kramer

	Lab Id:	671316-0	001	671316-0	002	671316-0	003	671316-0	004	671316-0	005	671316-0)06
Analysis Requested	Field Id:	PH01	PH01 A		PH02 A	ı							
Anaiysis Requesieu	Matrix: SOIL SOIL	1- ft		2- ft									
	Matrix:	SOIL	,	SOIL		SOIL		SOIL	,	SOIL		SOIL	r
	Sampled:	08.27.2020	08.27.2020 09:19		09:39	08.27.2020	09:54	08.27.2020	12:29	08.27.2020	10:05	08.27.2020	10:15
BTEX by EPA 8021B	Extracted:	08.28.2020	08.28.2020 16:51		16:51	08.28.2020	16:51	08.28.2020	16:51	08.28.2020	16:51	08.28.2020 16:51	
	Analyzed:	08.28.2020	23:27	08.28.2020	23:47	08.29.2020 00:07		08.29.2020	01:23	08.29.2020	01:44	08.29.2020	02:04
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene	·	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199
Toluene		< 0.00198	<0.00198 0.00198		0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199
Ethylbenzene		< 0.00198	0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199
m,p-Xylenes		<0.00395 0.00395				< 0.00399				< 0.00398	0.00398	< 0.00398	0.00398
o-Xylene	<0.00		0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199
Total Xylenes		<0.00198 0.00198		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199
Total BTEX		< 0.00198	0.00198	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199
Inorganic Anions by EPA 300	Extracted:	08.28.2020	15:05	08.28.2020 15:05		08.28.2020 15:05		08.28.2020	15:05	08.28.2020	15:05	08.28.2020	15:05
	Analyzed:	08.28.2020	19:44	08.28.2020	19:50	08.28.2020	19:55	08.28.2020	20:01	08.28.2020	20:17	08.28.2020	20:23
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		12300	198	3750	50.1	3720	50.2	6480	49.5	2820	49.9	17700	198
TPH by SW8015 Mod	Extracted:	08.28.2020	17:15	08.28.2020	17:15	08.28.2020	17:15	08.28.2020	17:15	08.28.2020	17:15	08.28.2020	17:15
	Analyzed:	08.29.2020	03:14	08.29.2020	03:35	08.29.2020	03:55	08.29.2020	04:15	08.29.2020	04:56	08.29.2020	05:16
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		< 50.0	50.0	< 50.1	50.1	<49.9	49.9	<49.9	49.9	<49.9	49.9	< 50.1	50.1
Diesel Range Organics (DRO)		< 50.0	50.0	<50.1	50.1	<49.9	49.9	<49.9	49.9	69.5	49.9	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		< 50.0	50.0	< 50.1	50.1	<49.9	49.9	<49.9	49.9	<49.9	49.9	<50.1	50.1
Total TPH		< 50.0	50.0	< 50.1	50.1	<49.9	49.9	<49.9	49.9	69.5	49.9	<50.1	50.1

BRL - Below Reporting Limit

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



Certificate of Analysis Summary 671316 WSP USA, Dallas, TX

Project Name: RDX 17-25

Project Id:

Project Location:

Contact:

034820010

Eddy County

Chris McKisson

Date Received in Lab: Fri 08.28.2020 14:08

Report Date: 01.12.2021 16:10

Project Manager: Jessica Kramer

	Lab Id:	671316-0	007	671316-0	008	671316-0	009	671316-0	010	671316-0	011	671316-0	012
Analysis Requested	Field Id:	PH02 I	В	PH03		PH03 A		PH03 E	•	PH03 C	:	PH04	
Anaiysis Requesteu	Depth:	4- ft		1- ft		2- ft		3- ft		4- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL	,	SOIL		SOIL	
	Sampled:	08.27.2020	08.27.2020 10:23		10:47	08.27.2020	11:07	08.27.2020 11:16		08.27.2020 11:22		08.27.2020	14:33
BTEX by EPA 8021B	Extracted:	08.28.2020	08.28.2020 16:51		16:51	08.28.2020	16:51	08.28.2020	16:51	08.28.2020	16:51	08.28.2020	16:51
	Analyzed:	08.29.2020	02:24	08.29.2020	02:45	08.29.2020	03:05	08.29.2020	03:26	08.29.2020	03:46	08.29.2020	04:06
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200
Toluene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200
Ethylbenzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200
m,p-Xylenes		<0.00399 0.00399		< 0.00401	0.00401	< 0.00403	0.00403	< 0.00402	0.00402	< 0.00397	0.00397	< 0.00399	0.00399
o-Xylene	<0.00200 0.00200		0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200
Total Xylenes	enes <0.00200 0.000		0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200
Total BTEX		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200
Inorganic Anions by EPA 300	Extracted:	08.28.2020	15:05	08.28.2020 15:05		08.28.2020	15:05	<0.00198 0.00198 08.28.2020 15:05		08.28.2020	15:05		
	Analyzed:	08.28.2020	20:29	08.28.2020	20:34	08.28.2020	20:51	08.28.2020 20:57		08.28.2020	21:02	08.28.2020 21:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3180	49.7	1890	49.9	1180	49.8	512	49.9	227	9.96	55.4	9.98
TPH by SW8015 Mod	Extracted:	08.28.2020	17:15	08.28.2020	17:15	08.28.2020	17:15	08.28.2020	17:15	08.28.2020	17:15	08.28.2020	17:15
	Analyzed:	08.29.2020	05:37	08.29.2020	05:57	08.29.2020	06:17	08.29.2020	06:37	08.29.2020	06:57	08.29.2020	07:18
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		< 50.0	50.0	<49.9	49.9	<49.9	49.9	< 50.0	50.0	< 50.1	50.1	< 50.0	50.0
Diesel Range Organics (DRO)		< 50.0	50.0	<49.9	49.9	<49.9	49.9	< 50.0	50.0	< 50.1	50.1	< 50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		< 50.0	50.0	<49.9	49.9	<49.9	49.9	< 50.0	50.0	< 50.1	50.1	< 50.0	50.0
Total TPH		< 50.0	50.0	<49.9	49.9	<49.9	49.9	< 50.0	50.0	< 50.1	50.1	< 50.0	50.0

BRL - Below Reporting Limit

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



Certificate of Analysis Summary 671316 WSP USA, Dallas, TX

Project Name: RDX 17-25

Project Id:

Project Location:

Contact:

034820010

Chris McKisson

Eddy County

Date Received in Lab: Fri 08.28.2020 14:08

Report Date: 01.12.2021 16:10

Project Manager: Jessica Kramer

	Lab Id:	671316-0	013	671316-0	014	671316-0)15	671316-	016	671316-0)17	671316-0	018
Analysis Requested	Field Id:	PH04	A	PH04	В	PH05		PH05 A	\	PH05 B		PH06	
Anaiysis Requestea	Depth:	2- ft		4- ft		1-		2-		4-		1-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.27.2020	08.27.2020 14:38		14:44	08.27.2020	15:18	08.27.2020	15:23	08.27.2020	15:33	08.27.2020	16:37
BTEX by EPA 8021B	Extracted:	08.28.2020	08.28.2020 16:51		17:56	08.28.2020	17:56	08.28.2020	17:56	08.28.2020	17:56	08.28.2020 17:56	
	Analyzed:	08.29.2020	04:27	08.29.2020	07:59	08.29.2020 08:20		08.29.2020	08:40	08.29.2020	09:01	08.29.2020	09:21
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00200	0.00200	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Toluene		< 0.00200	0.00200	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Ethylbenzene		< 0.00200	0.00200	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
m,p-Xylenes		<0.00399 0.0		< 0.00396	0.00396	< 0.00396	0.00396	< 0.00399	0.00399	< 0.00398	0.00398	< 0.00401	0.00401
o-Xylene	lene		0.00200	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Total Xylenes	<0.00		0.00200	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Total BTEX		< 0.00200	0.00200	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Inorganic Anions by EPA 300	Extracted:	08.28.2020	15:05	08.28.2020 17:09		08.28.2020	17:09	08.28.2020	17:09	08.28.2020	17:09	08.28.2020	17:09
	Analyzed:	08.28.2020	21:13	08.28.2020	21:47	08.28.2020	22:04	08.28.2020 22:09		08.28.2020	22:15	08.28.2020 22:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		23.1	9.98	<9.92	9.92	53.5	9.96	16.1	9.98	18.0	10.1	483	202
TPH by SW8015 Mod	Extracted:	08.28.2020	17:15	08.28.2020	17:15	08.28.2020	17:00	08.28.2020	17:00	08.28.2020	17:00	08.28.2020	17:00
	Analyzed:	08.29.2020	07:38	08.29.2020	07:58	08.28.2020	18:28	08.28.2020	19:29	08.28.2020	19:49	08.28.2020	20:09
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		< 50.0	50.0	<49.8	49.8	<49.9	49.9	< 50.1	50.1	<49.8	49.8	< 50.2	50.2
Diesel Range Organics (DRO)		<50.0	50.0	<49.8	49.8	<49.9	49.9	< 50.1	50.1	<49.8	49.8	< 50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		< 50.0	<50.0 50.0		49.8	<49.9	49.9	< 50.1	50.1	<49.8	49.8	< 50.2	50.2
Total TPH		< 50.0	50.0	<49.8	49.8	<49.9	49.9	< 50.1	50.1	<49.8	49.8	< 50.2	50.2

BRL - Below Reporting Limit

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

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Certificate of Analysis Summary 671316

WSP USA, Dallas, TX

Project Name: RDX 17-25

Project Id:

034820010

- .

Date Received in Lab: Fri 08.28.2020 14:08

Contact:

Chris McKisson

Report Date: 01.12.2021 16:10

Project Location: I

Eddy County

Project Manager: Jessica Kramer

	Lab Id:	671316-01	19	671316-0	20		
Analysis Paguested	Field Id:	PH06 A		PH06	В		
Analysis Requested	Depth:	2.5-		4.5-			
	Matrix:	SOIL		SOIL			
	Sampled:	08.27.2020 1	16:41	08.27.2020	16:55		
BTEX by EPA 8021B	Extracted:	08.28.2020 1	17:56	08.28.2020	17:56		
	Analyzed:	08.29.2020 0	9:41	08.29.2020	10:02		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00202	0.00202	< 0.00201	0.00201		
Toluene		< 0.00202	0.00202	< 0.00201	0.00201		
Ethylbenzene		< 0.00202	0.00202	< 0.00201	0.00201		
m,p-Xylenes		< 0.00403	0.00403	< 0.00402	0.00402		
o-Xylene		< 0.00202	0.00202	< 0.00201	0.00201		
Total Xylenes		< 0.00202	0.00202	< 0.00201	0.00201		
Total BTEX		< 0.00202	0.00202	< 0.00201	0.00201		
Inorganic Anions by EPA 300	Extracted:	08.28.2020 1	17:09	08.28.2020	17:09		
	Analyzed:	08.28.2020 2	22:37	08.28.2020	22:43		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		1200	49.5	969	9.98		
TPH by SW8015 Mod	Extracted:	08.28.2020 1	17:00	08.28.2020	17:00		
	Analyzed:	08.28.2020 2	20:29	08.28.2020	20:50		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.0	50.0		
Diesel Range Organics (DRO)		<49.8	49.8	< 50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8		< 50.0	50.0		
Total TPH		<49.8	49.8	< 50.0	50.0		

BRL - Below Reporting Limit

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

Analytical Report 671316

for

WSP USA

Project Manager: Chris McKisson

RDX 17-25 034820010 01.12.2021

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)



01.12.2021

Project Manager: Chris McKisson

WSP USA

2777 N. Stemmons Freeway, Suite 1600

Dallas, TX 75207

Reference: Eurofins Xenco, LLC Report No(s): 671316

RDX 17-25

Project Address: Eddy County

Chris McKisson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 671316. 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. 671316 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 671316

WSP USA, Dallas, TX

RDX 17-25

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	08.27.2020 09:19	1 ft	671316-001
S	08.27.2020 09:39	2 ft	671316-002
S	08.27.2020 09:54	4 ft	671316-003
S	08.27.2020 12:29	6 ft	671316-004
S	08.27.2020 10:05	1 ft	671316-005
S	08.27.2020 10:15	2 ft	671316-006
S	08.27.2020 10:23	4 ft	671316-007
S	08.27.2020 10:47	1 ft	671316-008
S	08.27.2020 11:07	2 ft	671316-009
S	08.27.2020 11:16	3 ft	671316-010
S	08.27.2020 11:22	4 ft	671316-011
S	08.27.2020 14:33	1 ft	671316-012
S	08.27.2020 14:38	2 ft	671316-013
S	08.27.2020 14:44	4 ft	671316-014
S	08.27.2020 15:18	1	671316-015
S	08.27.2020 15:23	2	671316-016
S	08.27.2020 15:33	4	671316-017
S	08.27.2020 16:37	1	671316-018
S	08.27.2020 16:41	2.5	671316-019
S	08.27.2020 16:55	4.5	671316-020
	S S S S S S S S S S S S S S S S S S S	S 08.27.2020 09:19 S 08.27.2020 09:39 S 08.27.2020 09:54 S 08.27.2020 12:29 S 08.27.2020 10:05 S 08.27.2020 10:15 S 08.27.2020 10:23 S 08.27.2020 10:47 S 08.27.2020 11:07 S 08.27.2020 11:16 S 08.27.2020 11:22 S 08.27.2020 14:33 S 08.27.2020 14:38 S 08.27.2020 14:38 S 08.27.2020 15:18 S 08.27.2020 15:23 S 08.27.2020 15:23 S 08.27.2020 16:37 S 08.27.2020 16:41	S 08.27.2020 09:19 1 ft S 08.27.2020 09:39 2 ft S 08.27.2020 09:54 4 ft S 08.27.2020 12:29 6 ft S 08.27.2020 10:05 1 ft S 08.27.2020 10:15 2 ft S 08.27.2020 10:23 4 ft S 08.27.2020 10:47 1 ft S 08.27.2020 11:07 2 ft S 08.27.2020 11:16 3 ft S 08.27.2020 11:22 4 ft S 08.27.2020 14:33 1 ft S 08.27.2020 14:38 2 ft S 08.27.2020 15:18 1 S 08.27.2020 15:23 2 S 08.27.2020 15:33 4 S 08.27.2020 16:37 1 S 08.27.2020 16:41 2.5

CASE NARRATIVE

eurofins Environment Testing Xenco

Client Name: WSP USA Project Name: RDX 17-25

 Project ID:
 034820010
 Report Date:
 01.12.2021

 Work Order Number(s):
 671316
 Date Received:
 08.28.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3135936 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed

by re-analysis.

Samples affected are: 671316-015 S,671316-015 SD.



WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH01** Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-001

Date Collected: 08.27.2020 09:19

Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst:

Date Prep:

08.28.2020 15:05

% Moisture:

Basis: Wet Weight

Seq Number: 3135891

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12300	198	mg/kg	08.28.2020 19:44		20

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

DTH Analyst: Seq Number: 3135945

08.28.2020 17:15 Date Prep:

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	08.29.2020 03:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	08.29.2020 03:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	08.29.2020 03:14	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	08.29.2020 03:14	U	1
Surrogate	C	as Number 9	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	95	%	70-135	08.29.2020 03:14
o-Terphenyl	84-15-1	100	%	70-135	08.29.2020 03:14

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH01 Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-001 Date Collected: 08.27.2020 09:19 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 08.28.2020 16:51 % Moisture:

Seq Number: 3135888

Date Prep: 08.28.2020 16.31

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	08.28.2020 23:27	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	08.28.2020 23:27	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	08.28.2020 23:27	U	1
m,p-Xylenes	179601-23-1	< 0.00395	0.00395		mg/kg	08.28.2020 23:27	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	08.28.2020 23:27	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	08.28.2020 23:27	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	08.28.2020 23:27	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	102	%	70-130	08.28.2020 23:27		
1,4-Difluorobenzene		540-36-3	95	%	70-130	08.28.2020 23:27		

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH01 A Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-002

Date Collected: 08.27.2020 09:39

Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst:

Date Prep: 08.28.2020 15:05 % Moisture:

Basis:

Wet Weight

Seq Number: 3135891

Parameter	Cas Number	Result	RL	Unit	Analysis Date	Flag	Dil
Chloride	16887-00-6	3750	50.1	mg/k	9 08.28.2020 19:50		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

DTH Analyst: Seq Number: 3135945

Date Prep:

08.28.2020 17:15

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	08.29.2020 03:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	08.29.2020 03:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	08.29.2020 03:35	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	08.29.2020 03:35	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	94	%	70-135	08.29.2020 03:35
o-Terphenyl	84-15-1	98	%	70-135	08.29.2020 03:35

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH01 A Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-002 Date Collected: 08.27.2020 09:39 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 08.28.2020 16:51 % Moisture:

Seq Number: 3135888

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	08.28.2020 23:47	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	08.28.2020 23:47	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	08.28.2020 23:47	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	08.28.2020 23:47	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	08.28.2020 23:47	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	08.28.2020 23:47	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	08.28.2020 23:47	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.28.2020 23:47	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.28.2020 23:47	



WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH01 B**

Matrix: Soil

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-003

Date Collected: 08.27.2020 09:54

Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Pre

Prep Method: E300P

Tech:

MAB

Analyst: MAB Seq Number: 3135891 Date Prep: 08

08.28.2020 15:05

% Moisture:

Basis: Wet Weight

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 3720
 50.2
 mg/kg
 08.28.2020 19:55
 5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

Analyst: DTH
Seq Number: 3135945

Date Prep:

08.28.2020 17:15

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	08.29.2020 03:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	08.29.2020 03:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	08.29.2020 03:55	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	08.29.2020 03:55	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	94	%	70-135	08.29.2020 03:55
o-Terphenyl	84-15-1	98	%	70-135	08.29.2020 03:55

WSP USA, Dallas, TX

RDX 17-25

08.28.2020 16:51

Sample Id: PH01 B Matrix: Soil

Lab Sample Id: 671316-003 Date Collected: 08.27.2020 09:54

Date Prep:

Analytical Method: BTEX by EPA 8021B

Tech: MAB

MAB Analyst:

Seq Number: 3135888

Date Received:08.28.2020 14:08

Sample Depth: 4 ft

Prep Method: SW5035A

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	08.29.2020 00:07	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	08.29.2020 00:07	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	08.29.2020 00:07	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	08.29.2020 00:07	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	08.29.2020 00:07	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	08.29.2020 00:07	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	08.29.2020 00:07	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	96	%	70-130	08.29.2020 00:07		
1,4-Difluorobenzene		540-36-3	100	%	70-130	08.29.2020 00:07		



WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH01** C Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-004

Date Collected: 08.27.2020 12:29

Sample Depth: 6 ft

Prep Method: E300P

Tech:

Analyst:

Analytical Method: Inorganic Anions by EPA 300

MAB

MAB

Date Prep:

08.28.2020 15:05

% Moisture:

Basis:

Wet Weight

Seq Number: 3135891

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6480	49.5	mg/kg	08.28.2020 20:01		5

Analytical Method: TPH by SW8015 Mod

DTH

Tech:

DTH Analyst: Seq Number: 3135945

08.28.2020 17:15 Date Prep:

% Moisture:

Prep Method: SW8015P

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	08.29.2020 04:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	08.29.2020 04:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	08.29.2020 04:15	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	08.29.2020 04:15	U	1
Surrogate	(Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	94	%	70-135	08.29.2020 04:15
o-Terphenyl	84-15-1	98	%	70-135	08.29.2020 04:15

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH01 C Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-004 Date Collected: 08.27.2020 12:29 Sample Depth: 6 ft

Prep Method: SW5035A

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB Date Prep: 08.28.2020 16:51

% Moisture:

Seq Number: 3135888

Date Prep: 08.28.2020 16.31

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	08.29.2020 01:23	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	08.29.2020 01:23	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	08.29.2020 01:23	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	08.29.2020 01:23	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	08.29.2020 01:23	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	08.29.2020 01:23	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	08.29.2020 01:23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	110	%	70-130	08.29.2020 01:23		
1,4-Difluorobenzene		540-36-3	101	%	70-130	08.29.2020 01:23		

WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH02** Matrix:

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-005

Soil Date Collected: 08.27.2020 10:05

Sample Depth: 1 ft

Prep Method: E300P

Analytical Method: Inorganic Anions by EPA 300

MAB

MAB Analyst:

Tech:

Date Prep:

08.28.2020 15:05

% Moisture:

Basis: Wet Weight

Prep Method: SW8015P

Seq Number: 3135891

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2820	49.9	mg/kg	08.28.2020 20:17		5

Analytical Method: TPH by SW8015 Mod

Tech:

DTH

DTH Analyst: Seq Number: 3135945 Date Prep:

08.28.2020 17:15

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	08.29.2020 04:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	69.5	49.9		mg/kg	08.29.2020 04:56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	08.29.2020 04:56	U	1
Total TPH	PHC635	69.5	49.9		mg/kg	08.29.2020 04:56		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH02 Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-005 Date Collected: 08.27.2020 10:05 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 08.28.2020 16:51 % Moisture:

Seq Number: 3135888

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	08.29.2020 01:44	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	08.29.2020 01:44	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	08.29.2020 01:44	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	08.29.2020 01:44	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	08.29.2020 01:44	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	08.29.2020 01:44	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	08.29.2020 01:44	U	1
Surrogate	Ca	as Number	% Recovery	Units	Limits	Analysis Date	Flag	
4.50 % 1			400		50.400	00 20 2020 04 44		

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH02 A Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-006

Date Collected: 08.27.2020 10:15

08.28.2020 15:05

Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Date Prep: % Moisture:

Analyst: Seq Number: 3135891

Basis:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17700	198	mg/kg	08.28.2020 20:23		20

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

DTH Analyst: Seq Number: 3135945

08.28.2020 17:15 Date Prep:

% Moisture:

Basis:

Wet Weight

Flag

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1	mg/kg	08.29.2020 05:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1	mg/kg	08.29.2020 05:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1	mg/kg	08.29.2020 05:16	U	1
Total TPH	PHC635	< 50.1	50.1	mg/kg	08.29.2020 05:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	98	%	70-135	08.29.2020 05:16
o-Terphenyl	84-15-1	100	%	70-135	08.29.2020 05:16

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH02 A Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-006 Date Collected: 08.27.2020 10:15 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 08.28.2020 16:51 % Moisture:

Seq Number: 3135888

Date Prep: 08.28.2020 16.31

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	08.29.2020 02:04	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	08.29.2020 02:04	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	08.29.2020 02:04	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	08.29.2020 02:04	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	08.29.2020 02:04	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	08.29.2020 02:04	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	08.29.2020 02:04	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	105	%	70-130	08.29.2020 02:04		
1,4-Difluorobenzene		540-36-3	101	%	70-130	08.29.2020 02:04		

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH02 B

Matrix: Soil

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-007

Date Collected: 08.27.2020 10:23

Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: Analyst: MAB

MAB

Date Prep: 08.28.2020 15:05

% Moisture:

Seq Number: 3135891

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3180	49.7	mg/kg	08.28.2020 20:29		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

Analyst: DTH
Seq Number: 3135945

Date Prep: 08.28.2020 17:15

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	08.29.2020 05:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	08.29.2020 05:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	08.29.2020 05:37	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	08.29.2020 05:37	U	1
Surrogate	•	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	95	%	70-135	08.29.2020 05:37
o-Terphenyl	84-15-1	100	%	70-135	08.29.2020 05:37

Wet Weight

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WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH02 B Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-007 Date Collected: 08.27.2020 10:23 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Seq Number: 3135888

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200	mg/kg	08.29.2020 02:24	U	1
Toluene	108-88-3	< 0.00200	0.00200	mg/kg	08.29.2020 02:24	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200	mg/kg	08.29.2020 02:24	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399	mg/kg	08.29.2020 02:24	U	1
o-Xylene	95-47-6	< 0.00200	0.00200	mg/kg	08.29.2020 02:24	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200	mg/kg	08.29.2020 02:24	U	1
Total BTEX		< 0.00200	0.00200	mg/kg	08.29.2020 02:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.29.2020 02:24	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.29.2020 02:24	



WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH03**

Seq Number: 3135891

Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-008

Date Collected: 08.27.2020 10:47

Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: Analyst: MAB

MAB

Date Prep:

08.28.2020 15:05

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	1890	49.9	mg/kg	08.28.2020 20:34		5	•

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

DTH Analyst: Seq Number: 3135945 Date Prep:

08.28.2020 17:15

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	08.29.2020 05:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	08.29.2020 05:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	08.29.2020 05:57	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	08.29.2020 05:57	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	93	%	70-135	08.29.2020 05:57
o-Terphenyl	84-15-1	98	%	70-135	08.29.2020 05:57

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH03 Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-008 Date Collected: 08.27.2020 10:47 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 08.28.2020 16:51 % Moisture:

Seq Number: 3135888

Date Prep: 08.28.2020 16.31

Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	08.29.2020 02:45	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	08.29.2020 02:45	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	08.29.2020 02:45	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	08.29.2020 02:45	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	08.29.2020 02:45	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	08.29.2020 02:45	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	08.29.2020 02:45	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	101	%	70-130	08.29.2020 02:45		
1,4-Difluorobenzene		540-36-3	99	%	70-130	08.29.2020 02:45		

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH03 A

Matrix: Soil

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-009

Date Collected: 08.27.2020 11:07

08.28.2020 15:05

Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: MAB

Analyst:

MAB

Date Prep:

% Moisture:

Seq Number: 3135891

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1180	49.8	mg/kg	08.28.2020 20:51		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

Analyst: DTH
Seq Number: 3135945

Date Prep: 08.28.2020 17:15

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	08.29.2020 06:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	08.29.2020 06:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	08.29.2020 06:17	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	08.29.2020 06:17	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	94	%	70-135	08.29.2020 06:17
o-Terphenyl	84-15-1	98	%	70-135	08.29.2020 06:17

Environment Testing

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RDX 17-25

Sample Id: PH03 A Matrix: Soil Date Received:08.28.2020 14:08

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Lab Sample Id: 671316-009

Date Collected: 08.27.2020 11:07

Sample Depth: 2 ft

08.29.2020 03:05

mg/kg

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135888

Prep Method: SW5035A

Tech: MAB

Analyst:

Total BTEX

MAB

Date Prep: 08.28.2020 16:51 % Moisture:

Basis:

Wet Weight

U

1

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202	mg/kg	08.29.2020 03:05	U	1
Toluene	108-88-3	< 0.00202	0.00202	mg/kg	08.29.2020 03:05	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202	mg/kg	08.29.2020 03:05	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403	mg/kg	08.29.2020 03:05	U	1
o-Xylene	95-47-6	< 0.00202	0.00202	mg/kg	08.29.2020 03:05	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202	mg/kg	08.29.2020 03:05	U	1

0.00202

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.29.2020 03:05	
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.29.2020 03:05	

< 0.00202

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH03 B

Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-010

Date Collected: 08.27.2020 11:16

Sample Depth: 3 ft

Prep Method: E300P

Analytical Method: Inorganic Anions by EPA 300

Tech:

MAB

MAB Analyst: Seq Number: 3135891 Date Prep: 08.28.2020 15:05 % Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	512	49.9	mg/kg	08.28.2020 20:57		5

Analytical Method: TPH by SW8015 Mod

Tech:

DTH

DTH Analyst: Seq Number: 3135945 Date Prep:

08.28.2020 17:15

% Moisture:

Prep Method: SW8015P

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	08.29.2020 06:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	08.29.2020 06:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	08.29.2020 06:37	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	08.29.2020 06:37	U	1
Surrogate	(Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	97	%	70-135	08.29.2020 06:37
o-Terphenyl	84-15-1	100	%	70-135	08.29.2020 06:37

WSP USA, Dallas, TX

RDX 17-25

Soil

Sample Id: PH03 B Matrix:

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-010 Date Collected: 08.27.2020 11:16

Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

MAB

Prep Method: SW5035A

Tech: MAB

Analyst:

Date Prep: 08.28.2020 16:51 %

% Moisture:

Seq Number: 3135888

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	08.29.2020 03:26	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	08.29.2020 03:26	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	08.29.2020 03:26	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	08.29.2020 03:26	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	08.29.2020 03:26	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	08.29.2020 03:26	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	08.29.2020 03:26	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	105	%	70-130	08.29.2020 03:26		
4-Bromofluorobenzene		460-00-4	106	%	70-130	08.29.2020 03:26		



WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH03 C

Matrix: Soil

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-011

Date Collected: 08.27.2020 11:22

Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: Analyst: MAB

MAB

Date Prep:

08.28.2020 15:05

% Moisture:

Basis:

: Wet Weight

Seq Number: 3135891

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 227
 9.96
 mg/kg
 08.28.2020 21:02
 1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

Analyst: DTH
Seq Number: 3135945

Date Prep: 08.

08.28.2020 17:15

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	08.29.2020 06:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	08.29.2020 06:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	08.29.2020 06:57	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	08.29.2020 06:57	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	101	%	70-135	08.29.2020 06:57
o-Terphenyl	84-15-1	105	%	70-135	08.29.2020 06:57

Wet Weight

08.29.2020 03:46

70-130

Certificate of Analytical Results 671316

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH03 C Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-011 Date Collected: 08.27.2020 11:22 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 08.28.2020 16:51 % Moisture: Basis:

460-00-4

Seq Number: 3135888

4-Bromofluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	08.29.2020 03:46	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	08.29.2020 03:46	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	08.29.2020 03:46	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	08.29.2020 03:46	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	08.29.2020 03:46	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	08.29.2020 03:46	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	08.29.2020 03:46	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1 4-Difluorobenzene	5	540-36-3	99	%	70-130	08.29.2020.03:46		

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WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH04** Lab Sample Id: 671316-012 Matrix: Soil Date Received:08.28.2020 14:08

Date Collected: 08.27.2020 14:33

Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst: Seq Number: 3135891

Date Prep:

08.28.2020 15:05

% Moisture:

Basis:

Wet Weight

Prep Method: SW8015P

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	55.4	9.98	mg/kg	08.28.2020 21:08		1

Analytical Method: TPH by SW8015 Mod

DTH Tech:

DTH Analyst: Seq Number: 3135945

08.28.2020 17:15 Date Prep:

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	08.29.2020 07:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	08.29.2020 07:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	08.29.2020 07:18	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	08.29.2020 07:18	U	1
Surrogate	•	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	96	%	70-135	08.29.2020 07:18
o-Terphenyl	84-15-1	98	%	70-135	08.29.2020 07:18

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH04 Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-012 Date Collected: 08.27.2020 14:33 Sample Depth: 1 ft

Prep Method: SW5035A

Wet Weight

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Seq Number: 3135888

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	08.29.2020 04:06	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	08.29.2020 04:06	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	08.29.2020 04:06	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	08.29.2020 04:06	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	08.29.2020 04:06	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	08.29.2020 04:06	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	08.29.2020 04:06	U	1
Surrogato	Co	s Number	% Recovery	Unite	I imite	Analysis Data	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.29.2020 04:06	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.29.2020 04:06	

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH04 A

Matrix: Soil

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-013

Date Collected: 08.27.2020 14:38

Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

Analyst: MAB
Seq Number: 3135891

Date Prep:

08.28.2020 15:05

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.1	9.98	mg/kg	08.28.2020 21:13		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

Analyst: DTH
Seq Number: 3135945

Date Prep:

08.28.2020 17:15

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	08.29.2020 07:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	08.29.2020 07:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	08.29.2020 07:38	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	08.29.2020 07:38	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Wet Weight

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WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH04 A Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-013 Date Collected: 08.27.2020 14:38 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Seq Number: 3135888

Parameter	Cas Number	Result	RL	Unit	s Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200	mg/k	g 08.29.2020 04:27	U	1
Toluene	108-88-3	< 0.00200	0.00200	mg/k	g 08.29.2020 04:27	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200	mg/k	g 08.29.2020 04:27	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399	mg/k	g 08.29.2020 04:27	U	1
o-Xylene	95-47-6	< 0.00200	0.00200	mg/k	g 08.29.2020 04:27	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200	mg/k	g 08.29.2020 04:27	U	1
Total BTEX		< 0.00200	0.00200	mg/k	g 08.29.2020 04:27	U	1
Cumpagata	Co	a Number	0/ Dagayawy	Unite Lin	nita Analysis Data	Flog	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.29.2020 04:27	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.29.2020 04:27	

WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH04 B**

Seq Number: 3135892

Matrix: Soil

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-014

Date Collected: 08.27.2020 14:44

Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:
Analyst:

MAB

MAB

Date Prep:

08.28.2020 17:09

% Moisture:

Basis:

: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	08.28.2020 21:47	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DTH

Analyst: DTH
Seq Number: 3135945

Date Prep: 08.28.2020 17:15

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	08.29.2020 07:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	08.29.2020 07:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	08.29.2020 07:58	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	08.29.2020 07:58	U	1
Surrogate	(Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH04 B**

Matrix: Soil

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-014

Date Collected: 08.27.2020 14:44

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

rate conceted: 00.27.2020 1 1.11

Prep Method: SW5035A

Tech: MA

MAB MAB

Date Prep:

08.28.2020 17:56 % M

% Moisture:

Seq Number: 3135889

Analyst:

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	08.29.2020 07:59	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	08.29.2020 07:59	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	08.29.2020 07:59	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	08.29.2020 07:59	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	08.29.2020 07:59	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	08.29.2020 07:59	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	08.29.2020 07:59	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	105	%	70-130	08.29.2020 07:59		
1,4-Difluorobenzene		540-36-3	95	%	70-130	08.29.2020 07:59		

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Certificate of Analytical Results 671316

WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH05** Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-015

Date Collected: 08.27.2020 15:18

Sample Depth: 1

Analytical Method: Inorganic Anions by EPA 300

Tech:

MAB

MAB Analyst:

Date Prep:

08.28.2020 17:09

% Moisture:

Basis: Wet Weight

Prep Method: E300P

Seq Number: 3135892

Parameter Cas Number Result RL Units **Analysis Date** Flag Dil Chloride 16887-00-6 53.5 08.28.2020 22:04 9.96 mg/kg

Analytical Method: TPH by SW8015 Mod

Tech:

DTH

DTH Analyst: Seq Number: 3135936

Date Prep:

08.28.2020 17:00

% Moisture:

Prep Method: SW8015P

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	08.28.2020 18:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	08.28.2020 18:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	08.28.2020 18:28	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	08.28.2020 18:28	U	1
Surrogate	(Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH05** Matrix: Soil

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-015 Date Collected: 08.27.2020 15:18 Sample Depth: 1

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Date Prep: 08.28.2020 17:56

% Moisture:

MAB Analyst: Seq Number: 3135889

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	08.29.2020 08:20	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	08.29.2020 08:20	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	08.29.2020 08:20	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	08.29.2020 08:20	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	08.29.2020 08:20	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	08.29.2020 08:20	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	08.29.2020 08:20	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	106	%	70-130	08.29.2020 08:20		
1,4-Difluorobenzene		540-36-3	100	%	70-130	08.29.2020 08:20		

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH05 A

Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-016

Date Collected: 08.27.2020 15:23

Sample Depth: 2

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst: Seq Number: 3135892 Date Prep:

08.28.2020 17:09

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.1	9.98	mg/kg	08.28.2020 22:09		1

Analytical Method: TPH by SW8015 Mod

Tech:

DTH

DTH Analyst: Seq Number: 3135936 Date Prep:

08.28.2020 17:00

% Moisture:

Prep Method: SW8015P

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	08.28.2020 19:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	08.28.2020 19:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	08.28.2020 19:29	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	08.28.2020 19:29	U	1
Surrogate	(Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	124	%	70-135	08.28.2020 19:29
o-Terphenyl	84-15-1	95	%	70-135	08.28.2020 19:29

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Certificate of Analytical Results 671316

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH05 A Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-016 Date Collected: 08.27.2020 15:23 Sample Depth: 2

460-00-4

Prep Method: SW5035A

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Seq Number: 3135889

4-Bromofluorobenzene

Analyst: MAB

MAB Date Prep:

08.28.2020 17:56 % Moisture:

70-130

Basis: Wet Weight

08.29.2020 08:40

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	08.29.2020 08:40	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	08.29.2020 08:40	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	08.29.2020 08:40	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	08.29.2020 08:40	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	08.29.2020 08:40	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	08.29.2020 08:40	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	08.29.2020 08:40	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	4	540-36-3	98	%	70-130	08.29.2020 08:40		

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WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH05 B Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-017

Date Collected: 08.27.2020 15:33

Sample Depth: 4

Analytical Method: Inorganic Anions by EPA 300

Tech:

MAB

MAB Analyst:

Date Prep:

08.28.2020 17:09

% Moisture:

Basis: Wet Weight

Prep Method: E300P

Seq Number: 3135892

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.0	10.1	mg/kg	08.28.2020 22:15		1

Analytical Method: TPH by SW8015 Mod

DTH Tech:

DTH Analyst: Seq Number: 3135936

Date Prep:

08.28.2020 17:00

% Moisture:

Prep Method: SW8015P

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	08.28.2020 19:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	08.28.2020 19:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	08.28.2020 19:49	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	08.28.2020 19:49	U	1
Surrogate	C	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	108	%	70-135	08.28.2020 19:49
o-Terphenyl	84-15-1	93	%	70-135	08.28.2020 19:49

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH05 B Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-017 Date Collected: 08.27.2020 15:33 Sample Depth: 4

Prep Method: SW5035A

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3135889

AB Date Prep: 08.28.2020 17:56

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	08.29.2020 09:01	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	08.29.2020 09:01	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	08.29.2020 09:01	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	08.29.2020 09:01	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	08.29.2020 09:01	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	08.29.2020 09:01	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	08.29.2020 09:01	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.29.2020 09:01	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.29.2020 09:01	

WSP USA, Dallas, TX

RDX 17-25

Sample Id: **PH06** Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-018

Date Collected: 08.27.2020 16:37

Sample Depth: 1

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst: Seq Number: 3135892

Date Prep: 08.28.2020 17:09 % Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	483	202	mg/kg	08.28.2020 22:20		20

Analytical Method: TPH by SW8015 Mod

DTH

Tech: Analyst:

Seq Number: 3135936

DTH

Date Prep:

08.28.2020 17:00

% Moisture:

Prep Method: SW8015P

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.2	50.2		mg/kg	08.28.2020 20:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.2	50.2		mg/kg	08.28.2020 20:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	08.28.2020 20:09	U	1
Total TPH	PHC635	< 50.2	50.2		mg/kg	08.28.2020 20:09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	105	%	70-135	08.28.2020 20:09
o-Terphenyl	84-15-1	93	%	70-135	08.28.2020 20:09

Wet Weight

Certificate of Analytical Results 671316

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH06 Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-018 Date Collected: 08.27.2020 16:37 Sample Depth: 1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Seq Number: 3135889

Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
71-43-2	< 0.00200	0.00200	mg/kg	08.29.2020 09:21	U	1
108-88-3	< 0.00200	0.00200	mg/kg	08.29.2020 09:21	U	1
100-41-4	< 0.00200	0.00200	mg/kg	08.29.2020 09:21	U	1
179601-23-1	< 0.00401	0.00401	mg/kg	08.29.2020 09:21	U	1
95-47-6	< 0.00200	0.00200	mg/kg	08.29.2020 09:21	U	1
1330-20-7	< 0.00200	0.00200	mg/kg	08.29.2020 09:21	U	1
	< 0.00200	0.00200	mg/kg	08.29.2020 09:21	U	1
	71-43-2 108-88-3 100-41-4 179601-23-1 95-47-6	71-43-2 <0.00200 108-88-3 <0.00200 100-41-4 <0.00200 179601-23-1 <0.00401 95-47-6 <0.00200 1330-20-7 <0.00200	71-43-2	71-43-2	71-43-2	71-43-2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.29.2020 09:21	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.29.2020 09:21	

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH06 A Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-019

Date Collected: 08.27.2020 16:41

Sample Depth: 2.5

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: Analyst: MAB

MAB

Date Prep: 08.28.2020 17:09 % Moisture:

Basis:

Wet Weight

Seq Number: 3135892

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1200	49.5	mg/kg	08.28.2020 22:37		5

Analytical Method: TPH by SW8015 Mod

DTH Tech:

DTH Analyst: Seq Number: 3135936

% Moisture: Date Prep: 08.28.2020 17:00

Basis:

Wet Weight

Prep Method: SW8015P

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	08.28.2020 20:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	08.28.2020 20:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	08.28.2020 20:29	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	08.28.2020 20:29	U	1
Surrogate	C	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	125	%	70-135	08.28.2020 20:29
o-Terphenyl	84-15-1	111	%	70-135	08.28.2020 20:29

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH06 A Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-019

4-Bromofluorobenzene

Date Collected: 08.27.2020 16:41

Sample Depth: 2.5

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech:

MAB MAB

08.28.2020 17:56

% Moisture:

70-130

Analyst: Seq Number: 3135889 Date Prep:

Basis: Wet Weight

08.29.2020 09:41

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	08.29.2020 09:41	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	08.29.2020 09:41	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	08.29.2020 09:41	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	08.29.2020 09:41	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	08.29.2020 09:41	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	08.29.2020 09:41	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	08.29.2020 09:41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	95	%	70-130	08.29.2020 09:41		

107

460-00-4



WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH06 B Matrix: Soil Date Received:08.28.2020 14:08

Lab Sample Id: 671316-020

Date Collected: 08.27.2020 16:55

Sample Depth: 4.5

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst:

Date Prep:

08.28.2020 17:09

% Moisture:

Seq Number: 3135892

Basis: Wet Weight

Prep Method: SW8015P

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	969	9.98	mg/kg	08.28.2020 22:43		1

Analytical Method: TPH by SW8015 Mod

DTH

Tech:

DTH Analyst: Seq Number: 3135936 Date Prep: 08.28.2020 17:00 % Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	08.28.2020 20:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	08.28.2020 20:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	08.28.2020 20:50	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	08.28.2020 20:50	U	1
Surrogate	(Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	97	%	70-135	08.28.2020 20:50
o-Terphenyl	84-15-1	98	%	70-135	08.28.2020 20:50

WSP USA, Dallas, TX

RDX 17-25

Sample Id: PH06 B

Matrix: Soil

08.28.2020 17:56

Date Received:08.28.2020 14:08

Lab Sample Id: 671316-020 Date Collected: 08.27.2020 16:55

Sample Depth: 4.5

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

MAB

% Moisture:

Analyst: MAB Seq Number: 3135889

Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	08.29.2020 10:02	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	08.29.2020 10:02	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	08.29.2020 10:02	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	08.29.2020 10:02	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	08.29.2020 10:02	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	08.29.2020 10:02	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	08.29.2020 10:02	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	104	%	70-130	08.29.2020 10:02		
1,4-Difluorobenzene		540-36-3	101	%	70-130	08.29.2020 10:02		

Date Prep:



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

E300P

E300P

08.28.2020

7710431-1-BSD

QC Summary 671316

WSP USA RDX 17-25

Analytical Method: Inorganic Anions by EPA 300 Prep Method: Seq Number: 3135891 Matrix: Solid Date Prep: 7710431-1-BLK LCS Sample Id: 7710431-1-BKS LCSD Sample Id: MB Sample Id:

RPD MB Spike LCS LCS Limits %RPD Units Analysis LCSD LCSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date Chloride <10.0 250 105 90-110 20 08.28.2020 18:31 263 266 106 1 mg/kg

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P Seq Number: 3135892 Matrix: Solid Date Prep: 08.28.2020 7710432-1-BLK LCS Sample Id: 7710432-1-BKS LCSD Sample Id: 7710432-1-BSD MB Sample Id:

MB Spike LCS LCS LCSD LCSD Limits %RPD RPD Units Analysis **Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result 08.28.2020 21:36 Chloride <10.0 250 263 105 266 106 90-110 1 20 mg/kg

Analytical Method: Inorganic Anions by EPA 300

Prep Method: 3135891 Seq Number: Matrix: Soil Date Prep: 08.28.2020 MS Sample Id: 671316-004 S MSD Sample Id: 671316-004 SD Parent Sample Id: 671316-004

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limits Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 6480 20 08.28.2020 20:06 200 6690 105 6690 104 90-110 0 mg/kg

Analytical Method: Inorganic Anions by EPA 300

E300P Prep Method: 3135892 Matrix: Soil 08.28.2020 Seq Number: Date Prep: Parent Sample Id: 671316-014 MS Sample Id: 671316-014 S MSD Sample Id: 671316-014 SD

RPD Parent Spike MS MS MSD **MSD** Limits %RPD Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec %Rec Result 08.28.2020 21:52 20 Chloride <9 94 199 205 103 205 103 90-110 0 mg/kg

Analytical Method: Inorganic Anions by EPA 300

E300P Prep Method: 3135892 Seq Number: Matrix: Soil Date Prep: 08.28.2020 Parent Sample Id: 671325-004 MS Sample Id: 671325-004 S MSD Sample Id: 671325-004 SD

Parent Spike MS MS Limits %RPD RPD Units Analysis MSD MSD Flag **Parameter** Result Limit Date Result Amount %Rec Result %Rec 08.28.2020 23:10 Chloride 156 199 353 99 350 97 90-110 1 20 mg/kg

Analytical Method: Inorganic Anions by EPA 300 Prep Method:

E300P 3135891 Seq Number: Matrix: Soil Date Prep: 08.28.2020

MS Sample Id: 671257-012 S Parent Sample Id: 671257-012

Spike MS MS Parent Limits Units Analysis Flag **Parameter** Result Amount Result %Rec Date 08.28.2020 18:48 90-110 mg/kg Chloride 245 201 447 100

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

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result = MSD/LCSD Result

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

Flag

QC Summary 671316

WSP USA RDX 17-25

Analytical Method: TPH by SW8015 Mod SW8015P Prep Method: Seq Number: 3135936 Matrix: Solid Date Prep: 08.28.2020

LCS Sample Id: 7710466-1-BKS LCSD Sample Id: 7710466-1-BSD MB Sample Id: 7710466-1-BLK RPD MB Spike LCS LCS Limits %RPD Units Analysis LCSD LCSD **Parameter** Result Amount Result %Rec %Rec Limit Date Result

Gasoline Range Hydrocarbons (GRO) 1080 108 35 08.28.2020 17:48 < 50.0 1000 1040 104 70-135 4 mg/kg 08.28.2020 17:48 Diesel Range Organics (DRO) 1000 871 87 824 70-135 6 35 mg/kg < 50.0 82 MB MB LCS LCS LCSD Limits Units Analysis LCSD

Surrogate Flag %Rec Flag Flag Date %Rec %Rec 08.28.2020 17:48 1-Chlorooctane 102 129 117 70-135 % 08.28.2020 17:48 o-Terphenyl 80 95 86 70-135 %

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method:

3135945 Seq Number: Matrix: Solid Date Prep: 08.28.2020 LCS Sample Id: 7710492-1-BKS LCSD Sample Id: 7710492-1-BSD MB Sample Id: 7710492-1-BLK

MB Spike LCS LCS LCSD Limits %RPD **RPD** Units Analysis LCSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date 08.28.2020 23:52 Gasoline Range Hydrocarbons (GRO) 98 < 50.0 1000 975 945 3 35 95 70-135 mg/kg 08.28.2020 23:52 Diesel Range Organics (DRO) < 50.0 1000 1080 108 1060 106 70-135 2 35 mg/kg

MB MB LCS LCS LCSD Limits Units LCSD Analysis Surrogate %Rec Date %Rec Flag Flag %Rec Flag 08.28.2020 23:52 1-Chlorooctane 120 133 129 70-135 % 08.28.2020 23:52 o-Terphenyl 126 130 125 70-135 %

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method:

Seq Number: 3135936 Matrix: Solid Date Prep: 08.28.2020

MB Sample Id: 7710466-1-BLK

MB Units Analysis Flag **Parameter** Result Date Motor Oil Range Hydrocarbons (MRO) 08.28.2020 17:28 < 50.0 mg/kg

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method:

3135945 Seq Number: Matrix: Solid Date Prep: 08.28.2020

MB Sample Id: 7710492-1-BLK

MB Units Analysis Flag **Parameter** Result Date 08.28.2020 23:32

Motor Oil Range Hydrocarbons (MRO) < 50.0 mg/kg

Flag

Flag

QC Summary 671316

WSP USA RDX 17-25

 Analytical Method:
 TPH by SW8015 Mod
 Prep Method:
 SW8015P

 Seq Number:
 3135936
 Matrix:
 Soil
 Date Prep:
 08.28.2020

 Description:
 MS Sample Id:
 671316 015 S
 MSD Sample Id:
 671316 015 S

Parent Sample Id: 671316-015 MS Sample Id: 671316-015 S MSD Sample Id: 671316-015 SD

RPD **Parent** Spike MS MS Limits %RPD Units Analysis MSD MSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) <49.8 995 1060 107 35 08.28.2020 18:49 1200 70-135 12 120 mg/kg 08.28.2020 18:49 2 mg/kg Diesel Range Organics (DRO) <49.8 995 863 87 70-135 35 847 85

MS MS **MSD** Limits Units Analysis MSD **Surrogate** %Rec Flag Flag Date %Rec ** 08.28.2020 18:49 1-Chlorooctane 138 ** 138 70-135 % 08.28.2020 18:49 o-Terphenyl 106 111 70-135 %

Analytical Method:TPH by SW8015 ModPrep Method:SW8015PSeq Number:3135945Matrix: SoilDate Prep:08.28.2020

Parent Sample Id: 671309-001 MS Sample Id: 671309-001 S Date Prep: 08.28.2020 MSD Sample Id: 671309-001 SD

Parent Spike MS MS MSD Limits %RPD **RPD** Units Analysis MSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date 08.29.2020 00:52 Gasoline Range Hydrocarbons (GRO) < 50.2 842 1000 84 790 79 70-135 35 6 mg/kg 08.29.2020 00:52 Diesel Range Organics (DRO) < 50.2 1000 769 77 738 74 70-135 4 35 mg/kg

MS MS MSD Limits Units MSD Analysis **Surrogate** Date %Rec Flag %Rec Flag 08.29.2020 00:52 1-Chlorooctane 111 103 70-135 % o-Terphenyl 08.29.2020 00:52 104 103 70-135 %

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3135888
 Matrix:
 Solid
 Date Prep:
 08.28.2020

 MB Sample Id:
 7710427-1-BLK
 LCS Sample Id:
 7710427-1-BKS
 LCSD Sample Id:
 7710427-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	I
Benzene	< 0.00200	0.100	0.100	100	0.105	105	70-130	5	35	mg/kg	08.28.2020 18:47	
Toluene	< 0.00200	0.100	0.0951	95	0.0987	99	70-130	4	35	mg/kg	08.28.2020 18:47	
Ethylbenzene	< 0.00200	0.100	0.0996	100	0.104	104	71-129	4	35	mg/kg	08.28.2020 18:47	
m,p-Xylenes	< 0.00400	0.200	0.202	101	0.212	106	70-135	5	35	mg/kg	08.28.2020 18:47	
o-Xylene	< 0.00200	0.100	0.102	102	0.105	105	71-133	3	35	mg/kg	08.28.2020 18:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		96		101		70-130	%	08.28.2020 18:47
4-Bromofluorobenzene	103		99		100		70-130	%	08.28.2020 18:47

Flag

QC Summary 671316

WSP USA RDX 17-25

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3135889Matrix:SolidDate Prep:08.28.2020MB Sample Id:7710428-1-BLKLCS Sample Id:7710428-1-BKSLCSD Sample Id:7710428-1-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	0.0955	96	0.101	101	70-130	6	35	mg/kg	08.29.2020 06:03	
Toluene	< 0.00200	0.100	0.0901	90	0.0963	96	70-130	7	35	mg/kg	08.29.2020 06:03	
Ethylbenzene	< 0.00200	0.100	0.0920	92	0.0980	98	71-129	6	35	mg/kg	08.29.2020 06:03	
m,p-Xylenes	< 0.00400	0.200	0.186	93	0.197	99	70-135	6	35	mg/kg	08.29.2020 06:03	
o-Xylene	< 0.00200	0.100	0.0944	94	0.101	101	71-133	7	35	mg/kg	08.29.2020 06:03	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	101		10	00	0			70	-130	%	08.29.2020 06:03	
4-Bromofluorobenzene	107	107 101		01	99		99		-130	130 % 08.2		

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3135888
 Matrix:
 Soil
 Date Prep:
 08.28.2020

 Parent Sample Id:
 671257-012
 MS Sample Id:
 671257-012 SD
 MSD Sample Id:
 671257-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00201	0.101	0.0919	91	0.101	101	70-130	9	35	mg/kg	08.28.2020 19:48
Toluene	< 0.00201	0.101	0.0866	86	0.0954	95	70-130	10	35	mg/kg	08.28.2020 19:48
Ethylbenzene	< 0.00201	0.101	0.0913	90	0.0987	99	71-129	8	35	mg/kg	08.28.2020 19:48
m,p-Xylenes	< 0.00402	0.201	0.185	92	0.204	101	70-135	10	35	mg/kg	08.28.2020 19:48
o-Xylene	< 0.00201	0.101	0.0892	88	0.0991	99	71-133	11	35	mg/kg	08.28.2020 19:48

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		95		70-130	%	08.28.2020 19:48
4-Bromofluorobenzene	97		102		70-130	%	08.28.2020 19:48

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3135889
 Matrix:
 Soil
 Date Prep:
 08.28.2020

 Parent Sample Id:
 671316-014
 MS Sample Id:
 671316-014 SD
 MSD Sample Id:
 671316-014 SD

MS %RPD Spike MS RPD **Parent** MSD MSD Limits Units Analysis **Parameter** Limit Date Result Amount %Rec Result Result %Rec Benzene < 0.00198 0.0990 0.0971 0.0891 70-130 9 35 mg/kg 08.29.2020 10:22 98 90 Toluene < 0.00198 0.0990 0.0925 93 0.0823 83 70-130 12 35 mg/kg 08.29.2020 10:22 08.29.2020 10:22 Ethylbenzene < 0.00198 0.0990 0.0941 95 0.0821 83 71-129 14 35 mg/kg 08.29.2020 10:22 m,p-Xylenes < 0.00396 0.198 0.190 96 0.165 70-135 14 35 mg/kg 08.29.2020 10:22 < 0.00198 98 0.0807 71-133 18 35 o-Xylene 0.0990 0.0967 mg/kg

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		103		70-130	%	08.29.2020 10:22
4-Bromofluorobenzene	97		100		70-130	%	08.29.2020 10:22

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 Duplic

 $Log\ Diff. = Log(Sample\ Duplicate) - Log(Original\ Sample)$

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: (071316

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 Crasibad, NM (432) 704-5440

Droiget Name	Phone:	City, State ZIP:	Address:	Company Name:	Project Manager:	
Project Name: Day 12 and		City, State ZIP: Midland TX 79785	Address: 3300 North A street	Company Name: LT Environmental	Project Manager: Joseph Hermando 3	Phoenix A7 (480)
THE WILLIAM	Email: Obvers @ Heaverson, NM 88220	Address: 5315 Butena Vista Dr.	Company Name: WYX Energy	Simulation Linda Laumbach	Alianta, SA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701	355 0000 All Co. (700) (402)
ADaPT (Other:	vel III	State of Project:	Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund	Work Order Comments	1) 689-6701 www.xenco.com Page 1 of 2	704-5440

		රිබිහි <i>14:0</i> පි 6 4	DE Chitza	Constant Constant
Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquisned by: (Signature)
nditions e control ed.	d subcontractors. It assigns standard terms and conditing tif such losses are due to circumstances beyond the case terms will be enforced unless previously negotiated.	or expenses incurred by the clien of to Xenco, but not analyzed. These	and shall not assume any responsibility for any losses ch project and a charge of \$5 for each sample submitted	of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.
Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U Se Ag Tl U 1631/245.1/	3 Cd Ca Cr Co Cu Fe Pb Mg Mn I r Co Cu Pb Mn Mo Ni Se Ag Tl U	Texas 11 Al Sb As Ba Be B Cd 8RCRA Sb As Ba Be Cd Cr Co	anples constitutes a valid purchase a data for the samples constitutes a valid purchase adda for the samples constitutes and the samples con	Circle Method(s) and Metal(s) to be analyzed Notice: Signature of this document and relinquishment of samples or
				Total 200.7 / 6010 200 8 / 6020:
		-	1187	DAZGA A
		-	1 4.401	KHQ'S
		>	1023 4'	1402B
		_	1015 2'	HP2A
		-	1005 11	THE
			1229 6'	21844
			495H H	MY B
		-	\$939 2'	PHO! A
		-	8/24/14 paig 11.	PHO
		Numb TPI BTE Chi	rix Date Time Depth	Sample Identification Matrix
		X	+	varible custody seals: Yes-(N) N/A
		EPA (E	0	Yes
		PA	1	a
		181	Thermometer ID	Temperature (°C): \. O /O.8
		tzi	Quote #:	CAMBIE DECEMENT
				Sampler's Name: Anna Byers
			Rush	Project Location Eddy Count
	AWAL I SIS REQUEST	Pres.	Ro	Project Number: Ø3482Ø00
-	ANALYSIS DECLIES		Turn Around	CALL VAL

Revised Date 022619 Rev. 2019.1

Chain of Custody

Work Order No: 671316

XENCO LABORATORIES

Project Manager: Company Name:

IT Environmental

3380 North

A Street

Bill to: (if different)
Company Name:

WAX EVERAN

unda

Laumbach

Address:

5315 Buena

Vista

0

State of Project:

Program: UST/PST ☐ PRP ☐ Brownfields ☐RRC ☐ Superfund ☐

Work Order Comments

www.xenco.com

Page

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00 2

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 Crasibad, 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

Calon and	mar Breez	Relinquished by: (Signature)	of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 200.8 / 6020:	PHOG B	PHOLA A	PHYL	PATES IS	PHØS A	PHPS	PHY4 B	PHBY A	PHPH	PHY3C	Sample Identification	Sample Custody Seals: Yes N	Cooler Custody Seals: Yes	0	Temperature (°C): 1.0	SAMPLE RECEIPT Te	2RP-41	Anna	Eddin	Project Number: \$3482	Project Name: RDX 17	Phone: 432 - 8	City, State ZIP: Midland
1 1 6	ついてか	Received by: (Signature)	of samples and shall not assume plied to each project and a charge	to be analyzed TC		4			_						5 8/27/24	Matrix Date Sampled	No N/A Total C	No N/A Correcti	777	(Temp Blank: (Yes No	16 Quote #:	Buers	ounty	20010	17-25	1495 - 168	SALLE XI'P
		: (Signature)	valid purchase order from client any responsibility for any losse ge of \$5 for each sample submit	CLP / SPLP 6010: 8RC	8RCRA 13PPM Texas 11	1655 4.5'	1641 2.5	11 +801	1533 4	1523 2'	1518 1'	1444 H,	1438 2'	1433 1'	1122 4'	Time Depth	Total Containers:	Correction Factor: -0.2	FOO-MU	D	Wet Ice: Yes No		Due Date:		Routine	Turn Around	Email: Obyers	City, St
30 H	100	Date/Time	company to Xenco, its affiliates as or expenses incurred by the clied to Xenco, but not analyzed. To	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb	s 11 Al Sb As Ba Be	2/	a /	2	2) A	-	- /	- / /		-	TPI BTE	H (EA (E	PA EPA	9	Ø19 BØ	21))	Code		s@ Henv. com	City, State ZIP: Carlsbad, NM
0 4	2	Relinquished by: (Signature)	and subcontractors. It assigns standard ter ient if such losses are due to circumstances hese terms will be enforced unless previous	Cr Co Cu Pb Mn Mo Ni Se Ag	B Cd Ca Cr Co Cu Fe Pb Mg																173	546	. 0			ANALYSIS REQUEST		NW 88220
	neceived by, (signature)		ns and conditions beyond the control y negotiated.		lg Mn Mo Ni K Se Ag SiO2 Na Sr																					UEST	Deliverables: EDD	Reporting:Level II Level III PST/UST TRRP Level IV
	Date/Time			/ 245.1 / 74	r TI Sn U V Zn											Sample Comments	IAI starts the day recevied by the lab, if received by 4:00pm	ZII Accidie+ NaOn, ZII	Zn Acceptate Nacht: 75	Noot: No	EO: E	H2S04: H2	None: NC	MeOn. We	N 1	Preservative Codes	T ☐ Other:	T/UST TRRP Level IV

Revised Date 022619 Rev. 2019.1

Certificate of Analysis Summary 676679

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-25

Environmental, Inc., Arvada, Co

Project Id:

034820010

Date Received in Lab: Mon 11.02.2020 15:50

Contact:

Joseph Hernandez

Report Date: 11.05.2020 08:10

Project Location:

NM

Project Manager: Jessica Kramer

	Lab Id:	676679-001			
Analysis Requested	Field Id:	CH01@1.5-2'			
71nutysis Requesicu	Depth:	1.5-2 ft			
	Matrix:	SOIL			
	Sampled:	10.29.2020 10:00			
BTEX by EPA 8021B	Extracted:	11.03.2020 09:30			
	Analyzed:	11.03.2020 16:09			
	Units/RL:	mg/kg RL			
Benzene		< 0.00201 0.00201			
Toluene		<0.00201 0.00201			
Ethylbenzene		<0.00201 0.00201			
m,p-Xylenes		<0.00402 0.00402			
o-Xylene		<0.00201 0.00201			
Total Xylenes		< 0.00201 0.00201			
Total BTEX		<0.00201 0.00201			
Chloride by EPA 300	Extracted:	11.02.2020 16:33			
	Analyzed:	11.02.2020 20:22			
	Units/RL:	mg/kg RL			
Chloride		344 9.96			
TPH by SW8015 Mod	Extracted:	11.02.2020 16:30			
	Analyzed:	11.03.2020 01:59			
	Units/RL:	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1			
Diesel Range Organics (DRO)		79.6 50.1			
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1			
Total TPH		79.6 50.1			

BRL - Below Reporting Limit

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

Jessica Weamer



Analytical Report 676679

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

RDX 17-25 034820010 11.05.2020

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 (T104704219-20-23) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



11.05.2020

Project Manager: Joseph Hernandez

LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): 676679

RDX 17-25

Project Address: NM

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) 676679. 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. 676679 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 676679

LT Environmental, Inc., Arvada, CO

RDX 17-25

 Sample Id
 Matrix
 Date Collected
 Sample Depth
 Lab Sample Id

 CH01@1.5-2'
 S
 10.29.2020 10:00
 1.5 - 2 ft
 676679-001

Xenco

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 17-25

 Project ID:
 034820010
 Report Date:
 11.05.2020

 Work Order Number(s):
 676679
 Date Received:
 11.02.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH01@1.5-2' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676679-001

Date Collected: 10.29.2020 10:00

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: Analyst: MAB

MAB

Date Prep: 11.02.2020 16:33 % Moisture:

Basis:

Wet Weight

Seq Number: 3141207

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	344	9.96	mg/kg	11.02.2020 20:22		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: Analyst: MAB

CAC

Seq Number: 3141201

Date Prep:

11.02.2020 16:30

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	11.03.2020 01:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	79.6	50.1		mg/kg	11.03.2020 01:59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	11.03.2020 01:59	U	1
Total TPH	PHC635	79.6	50.1		mg/kg	11.03.2020 01:59		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Wet Weight

11.03.2020 16:09

70-130

Certificate of Analytical Results 676679

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH01@1.5-2' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676679-001 Date Collected: 10.29.2020 10:00 Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

460-00-4

Seq Number: 3141311

4-Bromofluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	11.03.2020 16:09	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	11.03.2020 16:09	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	11.03.2020 16:09	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	11.03.2020 16:09	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	11.03.2020 16:09	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	11.03.2020 16:09	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	11.03.2020 16:09	U	1
Surrogate	(Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	5	540-36-3	102	%	70-130	11.03.2020 16:09		

116



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.

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

^{**} Surrogate recovered outside laboratory control limit.

QC Summary 676679

LT Environmental, Inc.

RDX 17-25

Analytical Method: Chloride by EPA 300

Seq Number: 3141207

7714384-1-BLK

Matrix: Solid

LCS

101

%Rec

7714384-1-BKS

LCSD

Result

252

E300P Prep Method: Date Prep: 11.02.2020

7714384-1-BSD

MB Sample Id: **Parameter**

Chloride

MB

LCS Sample Id:

LCS

253

Result

LCSD

%Rec

101

LCSD Sample Id: RPD

Limit

20

Units Analysis Flag Date

11.02.2020 18:55

Analytical Method: Chloride by EPA 300

3141207

Spike

250

Amount

Matrix: Soil

Prep Method:

%RPD

0

E300P 11.02.2020

mg/kg

Seq Number: Parent Sample Id:

676514-005

MS Sample Id: 676514-005 S

MSD Sample Id: 676514-005 SD

Date Prep:

Parameter

Parent Result Amount

Result

<10.0

MS MS Result %Rec

MSD %Rec %RPD RPD Units Limit

Analysis

Chloride

3690

3900 106 Result 3880

MSD

95 90-110

Limits

Limits

90-110

1 20 mg/kg

Flag Date 11.02.2020 19:11

Analytical Method: Chloride by EPA 300

3141207

200

Spike

199

Prep Method:

E300P

Seq Number: Matrix: Soil MS Sample Id: 676679-001 S Parent Sample Id: 676679-001

Date Prep: 11.02.2020 MSD Sample Id: 676679-001 SD

Parameter

Chloride

Spike **Parent** Result Amount

344

MS MS Result %Rec

530

MSD Result 542

MSD Limits %Rec 99 90-110

RPD %RPD Limit

20

2

Units

Analysis Flag Date

11.02.2020 20:28

Analytical Method: TPH by SW8015 Mod

3141201 Matrix: Solid

MB

Flag

Prep Method:

SW8015P

Date Prep: 11.02.2020

Units

%

%

mg/kg

Seq Number: MB Sample Id:

7714382-1-BLK

LCS Sample Id: 7714382-1-BKS

93

LCSD Sample Id: 7714382-1-BSD

Parameter

MB Spike Result Amount < 50.0 1000 LCS LCS

LCSD LCSD **RPD** Units

Limits %RPD Analysis Result Limit Date %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 11.02.2020 18:36 91 35 907 852 85 70-135 6 mg/kg Diesel Range Organics (DRO) 1040 104 1000 70-135 35 < 50.0 1000 100 4 mg/kg

Surrogate 1-Chlorooctane

MB%Rec 95 101

LCS %Rec 125

103

LCS Flag

LCSD

%Rec

105

101

LCSD

Flag

11.02.2020 18:36 Analysis

Date

11.02.2020 18:36

11.02.2020 18:36

o-Terphenyl

Limits

70-135

70-135

SW8015P

Seq Number:

3141201

Analytical Method: TPH by SW8015 Mod

Matrix: Solid

11.02.2020

Parameter

MBResult

MB Sample Id: 7714382-1-BLK

Date Prep:

Prep Method:

Flag

Flag

Motor Oil Range Hydrocarbons (MRO)

< 50.0

mg/kg

Units

Date 11.02.2020 18:16

Analysis

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

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

Flag

QC Summary 676679

LT Environmental, Inc.

RDX 17-25

 Analytical Method:
 TPH by SW8015 Mod
 Prep Method:
 SW8015P

 Seq Number:
 3141201
 Matrix:
 Soil
 Date Prep:
 11.02.2020

 Parent Sample Id:
 676514-007
 MS Sample Id:
 676514-007 S
 MSD Sample Id:
 676514-007 SD

RPD **Parent** Spike MS MS Limits %RPD Units Analysis MSD MSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) < 50.2 1000 837 84 0 35 11.02.2020 19:37 838 84 70-135 mg/kg 11.02.2020 19:37 70-135 Diesel Range Organics (DRO) < 50.2 1000 910 91 927 93 2 35 mg/kg

MSD MS MS MSD Limits Units Analysis **Surrogate** Flag Flag Date %Rec %Rec 11.02.2020 19:37 1-Chlorooctane 129 133 70-135 % 11.02.2020 19:37 o-Terphenyl 118 123 70-135 %

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3141311Matrix:SolidDate Prep:11.03.2020

MB Sample Id: 7714461-1-BLK LCS Sample Id: 7714461-1-BKS LCSD Sample Id: 7714461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	11.03.2020 09:56
Toluene	< 0.00200	0.100	0.0955	96	0.101	101	70-130	6	35	mg/kg	11.03.2020 09:56
Ethylbenzene	< 0.00200	0.100	0.0976	98	0.102	102	71-129	4	35	mg/kg	11.03.2020 09:56
m,p-Xylenes	< 0.00400	0.200	0.197	99	0.205	103	70-135	4	35	mg/kg	11.03.2020 09:56
o-Xylene	< 0.00200	0.100	0.0967	97	0.102	102	71-133	5	35	mg/kg	11.03.2020 09:56

MB MB LCS LCS LCSD Limits Units Analysis LCSD **Surrogate** %Rec Flag %Rec Flag %Rec Flag Date 11.03.2020 09:56 1,4-Difluorobenzene 104 99 104 70-130 % 11.03.2020 09:56 4-Bromofluorobenzene 103 70-130 % 110 110

 Analytical Method:
 BTEX by EPA 8021B
 Prep Method:
 SW5035A

 Seq Number:
 3141311
 Matrix:
 Soil
 Date Prep:
 11.03.2020

 Parent Sample Id:
 676514-007
 MS Sample Id:
 676514-007 S
 MSD Sample Id:
 676514-007 SD

RPD **Parent** Spike MS MS MSD MSD Limits %RPD Units Analysis Flag **Parameter** Limit Date Result Amount Result %Rec %Rec Result 11.03.2020 10:41 < 0.00201 0.101 0.107 106 0.0886 70-130 19 35 Benzene 89 mg/kg 11.03.2020 10:41 70-130 35 Toluene < 0.00201 0.101 0.0986 98 0.0879 88 11 mg/kg Ethylbenzene < 0.00201 0.101 0.0998 99 0.0910 91 71-129 9 35 11.03.2020 10:41 mg/kg 0.201 0.202 100 8 35 11.03.2020 10:41 m,p-Xylenes < 0.00402 0.186 93 70-135 mg/kg < 0.00201 0.101 0.102 101 0.0943 94 71-133 8 35 mg/kg 11.03.2020 10:41 o-Xylene

MS MS **MSD MSD** Limits Units Analysis Surrogate Flag Flag Date %Rec %Rec 11.03.2020 10:41 1,4-Difluorobenzene 100 101 70-130 % 11.03.2020 10:41 4-Bromofluorobenzene 107 117 70-130 %

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 Dupli

 $Log\ Diff. = Log(Sample\ Duplicate) - Log(Original\ Sample)$

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

0	1
-	47
(2
(2
-	4
	1

Work Order No: 67667

Project Manager: Jo	Joseph Hernandez		Bill to: (if different)	erent) Lynda Laumbach	Bill to: (if different) Lynda Laumbach		Work Order Comments	nts
	LT Environmental, Inc	Inc.	Company Name:	765:17		Program: UST/PST [□RP □rownfields F	¶_c ¶perfund
	3300 North A Street	et	Address:		ta Dr	State of Project:		
e ZIP:	Midland, TX 79705		City, State ZIP:	ZIP: Carlsbad, NM 88220	8220		□ PvelIII □ T/UST T	T_RP LLIeIV
	281-702-2329		Email: jhernande	ltenv.	@ltenv.com	Deliverables: EDD	ADaPT 🗆	Other:
Name:	RDX 17-25		Turn Around		ANALYSIS REQUEST	UEST , ,	-	Work Order Notes
97:	034820010		Routine 🔯					
	Liner		Rush:					
ne:	Anna Byers		Due Date:					
SE	PT Temp Blank:	Blank: (Yes) No	Wet Ice: Yes No					
/001.	5		Thermometer ID	ers				
Temperature (°C):	No.		TIMOO7	Mod) B)	00.0)			
Cooler Custody Seals:	6	NA A	Correction Factor: -0 -2	15 N 3021	A 30		TAT s	TAT starts the day recevied by the
Sample Custody Seals:	Yes No		Total Containers:	PA 80	e (EF		<u>a</u>	lab, if received by 4:30pm
Sample Identification		Matrix Date Sampled	Time Depth	Number TPH (E	Chlorid		S	Sample Comments
1 8 18HO	5-2/	S 16/20/20	1000 1.5-2	`	×			
	ll							
				<u>,</u>				
				(
							1	
Total 200.7 / 6010	10 200.8 / 6020:		8RCRA 13PPM Tex		Be B Cd Ca Cr Co Cu Fe F	Pb Mg Mn Mo Ni K Se	Ag SiO2	Na Sr Tl Sn ∪ V Zn
Circle Method(s)	Circle Method(s) and Metal(s) to be analyzed	be analyzed	TCLP / SPLP 6010: BRCRA	BRCRA SD AS BA BE		N Se Ag II o		10311243.11141011411.
Notice: Signature of this doc of Service. Xenco will be lial	ocument and relinquish table only for the cost of ge of \$75.00 will be app	ment of samples const samples and shall not lied to each project an	itutes a valid purchase order t assume any responsibility for d a charge of \$5 for each san	from client company to Xenco, or any losses or expenses incu ople submitted to Xenco, but no	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	It assigns standard terms and conditions re due to circumstances beyond the contro morced unless previously negotiated.	rol	
Relinquished by: (Signature)	(Signature)	Received	Reseived by: (Signature)	Date/Time	Relinquished by: (Signature)		Received by: (Signature)	Date/Time
Prance !	men			05:51 02/1/11	2			
Jun Mary	0.00	7	7		4			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable I

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 11.02.2020 03.50.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 676679

Analyst:

Temperature Measuring device used: T NM 007

		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 contain	ner/ 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 relinquish	Yes		
#10 Chain of Custody agrees with sample labels/matrix?			
#11 Container label(s) legible and intact?			
#12 Samples in proper container/ bottle?			
#13 Samples properly preserved?		Yes	
#14 Sample container(s) intact?			
#15 Sufficient sample amount for indicated test(s)?			
#16 All samples received within hold time?			
#17 Subcontract of sample(s)?		N/A	
#18 Water VOC samples have zero headsp	ace?	N/A	

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

Checklist completed by:	Martha Castro	Date: <u>11.02.2020</u>

PH Device/Lot#:

Checklist reviewed by:

Jessica Warner

Date: 11.03.2020

Page 105 of 190

Certificate of Analysis Summary 676680

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-25

Project Id: Contact:

034820010

Date Received in Lab: Mon 11.02.2020 15:50

Joseph Hernandez

Report Date: 01.13.2021 16:20

Project Location:			Project Manager: Jessica Kramer
	Lab Id:	676680-001	
Analysis Requested	Field Id:	CH01 @3.5-4'	
Anaiysis Kequesiea	Depth:	3.5-4 ft	
	Matrix:	SOIL	
	Sampled:	10.29.2020 10:52	
BTEX by EPA 8021B	Extracted:	11.03.2020 09:30	
	Analyzed:	11.03.2020 16:32	
	Units/RL:	mg/kg RL	
Benzene	·	<0.00200 0.00200	
Toluene		<0.00200 0.00200	
Ethylbenzene		<0.00200 0.00200	
m,p-Xylenes		< 0.00400 0.00400	
o-Xylene		<0.00200 0.00200	
Total Xylenes		< 0.00200 0.00200	
Total BTEX		<0.00200 0.00200	
Chloride by EPA 300	Extracted:	11.02.2020 16:33	
	Analyzed:	11.02.2020 20:39	
	Units/RL:	mg/kg RL	
Chloride		3230 49.9	
TPH by SW8015 Mod	Extracted:	11.02.2020 16:30	
	Analyzed:	11.03.2020 02:18	
	Units/RL:	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)	'	<13.9 50.1	
Diesel Range Organics (DRO)		16.3 J 50.1	
Motor Oil Range Hydrocarbons (MRO)		<11.5 50.1	
Total TPH		16.3 J 50.1	

BRL - Below Reporting Limit

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

Jessica Vramer



Analytical Report 676680

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

RDX 17-25 034820010 01.13.2021

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)



01.13.2021

Project Manager: **Joseph Hernandez LT Environmental, Inc.**

4600 W. 60th Avenue Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): 676680

RDX 17-25
Project Address:

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) 676680. 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. 676680 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 676680

LT Environmental, Inc., Arvada, CO

RDX 17-25

 Sample Id
 Matrix
 Date Collected
 Sample Depth
 Lab Sample Id

 CH01 @3.5-4'
 S
 10.29.2020 10:52
 3.5 - 4 ft
 676680-001

Xenco

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 17-25

 Project ID:
 034820010
 Report Date:
 01.13.2021

 Work Order Number(s):
 676680
 Date Received:
 11.02.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 676680

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: **CH01** @**3.5-4**'

Matrix: Soil

Date Received:11.02.2020 15:50

Lab Sample Id: 676680-001

Date Collected: 10.29.2020 10:52

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

MAB

% N

% Moisture:

Analyst:

Seq Number: 3141207

11.02.2020 16:33

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3230	49.9	mg/kg	11.02.2020 20:39		5

Date Prep:

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: Analyst: MAB

CAC

Seq Number: 3141201

Date Prep:

11.02.2020 16:30

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<13.9	50.1		mg/kg	11.03.2020 02:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	16.3	50.1		mg/kg	11.03.2020 02:18	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<11.5	50.1		mg/kg	11.03.2020 02:18	U	1
Total TPH	PHC635	16.3	50.1		mg/kg	11.03.2020 02:18	J	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	125	%	70-135	11.03.2020 02:18
o-Terphenyl	84-15-1	125	%	70-135	11.03.2020 02:18

Wet Weight

11.03.2020 16:32

70-130

Certificate of Analytical Results 676680

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH01 @3.5-4' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676680-001 Date Collected: 10.29.2020 10:52 Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

460-00-4

Seq Number: 3141311

4-Bromofluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	11.03.2020 16:32	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	11.03.2020 16:32	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	11.03.2020 16:32	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	11.03.2020 16:32	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	11.03.2020 16:32	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	11.03.2020 16:32	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	11.03.2020 16:32	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1 4-Difluorobenzene	4	540-36-3	105	%	70-130	11.03.2020 16:32		

115



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

QC Summary 676680

LT Environmental, Inc.

RDX 17-25

252

Analytical Method: Chloride by EPA 300

Seq Number: 3141207

7714384-1-BLK

Matrix: Solid LCS Sample Id: 7714384-1-BKS

LCS

253

Result

E300P Prep Method:

Date Prep: 11.02.2020

LCSD Sample Id: 7714384-1-BSD

Parameter

MB Spike Result Amount

250

<10.0

LCS LCSD %Rec Result 101

LCSD %Rec

101

Limits %RPD

0

%RPD

1

RPD Units Limit mg/kg

Analysis Flag Date

Flag

Flag

Flag

Analytical Method: Chloride by EPA 300

Seq Number:

3141207

Matrix: Soil

90-110

Date Prep: 11.02.2020

E300P

Parent Sample Id:

676514-005

MS Sample Id: 676514-005 S MSD Sample Id: 676514-005 SD Units

Parameter

MB Sample Id:

Chloride

Parent Spike Result Amount 3690 199

MS MS Result %Rec 3900 106

MSD MSD %Rec Result 3880 95

Limits 90-110 RPD Limit 20 mg/kg

Prep Method:

20

Analysis Date 11.02.2020 19:11

11.02.2020 18:55

Chloride

Analytical Method: Chloride by EPA 300

3141207

Matrix: Soil

Spike

200

Amount

344

MB

%Rec

Prep Method: E300P

Date Prep: 11.02.2020

Parent Sample Id:

676679-001

MS Sample Id: 676679-001 S MS

93

MSD Sample Id: 676679-001 SD

mg/kg

Parameter

Chloride

Seq Number:

Parent Result

MS Result %Rec 530

MSD Result 542

%Rec 99 90-110

Limits

MSD

RPD %RPD Limit

20

2

Units Analysis

Flag Date 11.02.2020 20:28

Analytical Method: TPH by SW8015 Mod

Seq Number:

3141201

Matrix: Solid

MB

Flag

SW8015P Prep Method: Date Prep:

11.02.2020

MB Sample Id:

7714382-1-BLK

LCS Sample Id: 7714382-1-BKS LCSD Sample Id: 7714382-1-BSD

Parameter

LCS LCS LCSD

LCSD Limits

%RPD **RPD** Units

Analysis

MB Spike Result Limit Date Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 11.02.2020 18:36 91 35 <139 1000 907 852 85 70-135 6 mg/kg 11.02.2020 18:36 Diesel Range Organics (DRO) 1040 104 1000 70-135 35 <11.5 1000 100 4 mg/kg

Surrogate

1-Chlorooctane 95 o-Terphenyl 101

LCS LCS Flag %Rec 125

103

LCSD %Rec

LCSD

Flag

Limits

70-135

70-135

Units Analysis Date 11.02.2020 18:36 %

11.02.2020 18:36

Analytical Method: TPH by SW8015 Mod 3141201

Matrix: Solid

MB Sample Id: 7714382-1-BLK

105

101

Prep Method: Date Prep: SW8015P 11.02.2020

Parameter

Seq Number:

Result Motor Oil Range Hydrocarbons (MRO)

MB

<11.5

Units

mg/kg

%

Analysis Date

11.02.2020 18:16

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

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

Flag

Flag

SW8015P

QC Summary 676680

LT Environmental, Inc.

RDX 17-25

Analytical Method:TPH by SW8015 ModPrep Method:Seq Number:3141201Matrix: SoilDate Prep:

 Seq Number:
 3141201
 Matrix:
 Soil
 Date Prep:
 11.02.2020

 Parent Sample Id:
 676514-007
 MS Sample Id:
 676514-007 S
 MSD Sample Id:
 676514-007 SD

RPD **Parent** Spike MS MS Limits %RPD Units Analysis MSD MSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) 1000 837 84 0 35 11.02.2020 19:37 <13.9 838 84 70-135 mg/kg 11.02.2020 19:37 70-135 mg/kg Diesel Range Organics (DRO) <11.5 1000 910 91 927 93 2 35

MSD Limits Units MS MS MSD Analysis **Surrogate** %Rec Flag Flag Date %Rec 11.02.2020 19:37 1-Chlorooctane 129 133 70-135 % 11.02.2020 19:37 o-Terphenyl 118 123 70-135 %

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3141311
 Matrix:
 Solid
 Date Prep:
 11.03.2020

 MB Sample Id:
 7714461-1-BLK
 LCS Sample Id:
 7714461-1-BKS
 LCSD Sample Id:
 7714461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	11.03.2020 09:56
Toluene	< 0.00200	0.100	0.0955	96	0.101	101	70-130	6	35	mg/kg	11.03.2020 09:56
Ethylbenzene	< 0.00200	0.100	0.0976	98	0.102	102	71-129	4	35	mg/kg	11.03.2020 09:56
m,p-Xylenes	< 0.00400	0.200	0.197	99	0.205	103	70-135	4	35	mg/kg	11.03.2020 09:56
o-Xylene	< 0.00200	0.100	0.0967	97	0.102	102	71-133	5	35	mg/kg	11.03.2020 09:56

MBMB LCS LCS LCSD Limits Units Analysis LCSD **Surrogate** %Rec Flag %Rec Flag %Rec Flag Date 11.03.2020 09:56 1,4-Difluorobenzene 104 99 104 70-130 % 11.03.2020 09:56 4-Bromofluorobenzene 103 110 70-130 % 110

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3141311Matrix: SoilDate Prep:11.03.2020

Parent Sample Id: 676514-007 MS Sample Id: 676514-007 S MSD Sample Id: 676514-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00201	0.101	0.107	106	0.0886	89	70-130	19	35	mg/kg	11.03.2020 10:41	
Toluene	< 0.00201	0.101	0.0986	98	0.0879	88	70-130	11	35	mg/kg	11.03.2020 10:41	
Ethylbenzene	< 0.00201	0.101	0.0998	99	0.0910	91	71-129	9	35	mg/kg	11.03.2020 10:41	
m,p-Xylenes	< 0.00402	0.201	0.202	100	0.186	93	70-135	8	35	mg/kg	11.03.2020 10:41	
o-Xylene	< 0.00201	0.101	0.102	101	0.0943	94	71-133	8	35	mg/kg	11.03.2020 10:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		70-130	%	11.03.2020 10:41
4-Bromofluorobenzene	107		117		70-130	%	11.03.2020 10:41

E = MSD/LCSD Result

		4	4	9		0	(
		2	120 15:50 2	1		2	am B
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Receiv	y: (Signature)	Relinquished by: (Signature)
	s. It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	lient company to Xenco, its aff osses or expenses incurred by bmitted to Xenco, but not analy	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractor. of service, Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses of Senco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be	uishment of samples o st of samples and shal applied to each projec	document and reling liable only for the co arge of \$75.00 will bu	otice: Signature of this service. Xenco will be Xenco. A minimum ch
SiO2 Na Sr TI Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Hg	Ag SiO2	NI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	RA Sb As Ba Be B	8RCRA 13PPM Texas 11 / TCLP / SPLP 6010: 8RCRA	6020: to be analyzed	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 Circle Method(s) a
		/					
			1				
			1				
			~ × ×	20 1825 3.5-4'	S 10/20/20	3.5-41	CHOICE ?
Sample Comments			TPH (EI BTEX (I	Time Depth	Matrix Sampled	ntification	Sample Identification
lab, if received by 4:30pm			PA 8	Total Containers:	NA	Yes	Sample Custody Seals:
TAT starts the day recevied by the	TAT		015 I 8021	2.0	N/A	Ye	Cooler Custody Seals:
			Mod B)	+NW007	No	(Yes	Received Intact:
)		8	1-21	Temperature (°C):
			3	No Wet Ice: Yes No	Temp Blank: Yes)		SAMPLE RECEIPT
				Due Date:		Anna Byers	Sampler's Name:
						Liner	P.O. Number:
				Routine 😾		034820010	Project Number:
Work Order Notes		ANALYSIS REQUEST		Turn Around		RDX 17-25	Project Name:
Other:	Deliverables: EDD ADaPT		Email: jhernandez@ltenv.com & abyers@ltenv.com	Email: jhernandez@li		281-702-2329	Phone:
TOP LON [Reporting:Level II		Carlsbad, NM 88220	City, State ZIP:	9705	Midland, TX 79705	City, State ZIP:
	State of Project:		5315 Buena Vista Dr	Address:	Street	3300 North A Street	Address:
R_c ¶perfund	Program: UST/PST ☐RP ☐rownfields	Pr	: WPX Energy	Company Name:	ntal, Inc.	LT Environmental, Inc	Company Name:
ents	Work Order Comments		Lynda Laumbach	Bill to: (if different)		Joseph Hernandez	Project Manager:
Page of	www.xenco.com	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	VZ (480-355-0900) Atlanta,C	Hobbs,NM (575-392-7550) Phoenix,			
		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	Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock TX (808);	Houston, TX (281) 240-42 Midland. TX (432-704-54	9	BORATORIE	The state of the s
	Work Order No:	usiouy	Chain of Custody				
5		HETOMY					

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 11.02.2020 03.50.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 676680

Analyst:

Temperature Measuring device used: TNM007

	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 contain	ner/ 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 relinquish	ed/ received?	Yes	
#10 Chain of Custody agrees with sample la	bels/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	
#13 Samples properly preserved?		Yes	
#14 Sample container(s) intact?		Yes	
#15 Sufficient sample amount for indicated to	est(s)?	Yes	
#16 All samples received within hold time?		Yes	
#17 Subcontract of sample(s)?		N/A	
#18 Water VOC samples have zero headspa	ace?	N/A	

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

Checklist completed by:	Martha Castro	Date: <u>11.02.2020</u>	
Checklist reviewed by:		Date: 11.03.2020	

PH Device/Lot#:

Certificate of Analysis Summary 676707

LT Environmental, Inc., Arvada, CO

Project Id:

Project Location:

034820010

NM

Project Name: RDX 17-25

Date Received in Lab: Mon 11.02.2020 15:50

Contact: Joseph Hernandez

Report Date: 11.04.2020 12:59

Project Manager: Jessica Kramer

Project Location:				Project M	ianager: Jessica Krai	IICI
	Lab Id:	676707-001				
Analysis Requested	Field Id:	CH01 @ 5.5-6'				
Anaiysis Requesieu	Depth:	5.5-6 ft				
	Matrix:	SOIL				
	Sampled:	10.29.2020 10:55				
BTEX by EPA 8021B	Extracted:	11.03.2020 14:07				
	Analyzed:	11.03.2020 17:47				
	Units/RL:	mg/kg RL				
Benzene		< 0.00202 0.00202				
Toluene		< 0.00202 0.00202				
Ethylbenzene		< 0.00202 0.00202				
m,p-Xylenes		<0.00403 0.00403				
o-Xylene		< 0.00202 0.00202				
Total Xylenes		< 0.00202 0.00202				
Total BTEX		< 0.00202 0.00202				
Inorganic Anions by EPA 300	Extracted:	11.03.2020 13:00				
	Analyzed:	11.03.2020 15:21				
	Units/RL:	mg/kg RL				
Chloride		606 49.9				
TPH by SW8015 Mod	Extracted:	11.03.2020 13:27				
	Analyzed:	11.03.2020 16:21				
	Units/RL:	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)	·	<50.0 50.0				
Diesel Range Organics (DRO)		<50.0 50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0				
Total TPH		<50.0 50.0				

BRL - Below Reporting Limit

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

Jessica Vramer



Analytical Report 676707

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

RDX 17-25 034820010 11.04.2020

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 (T104704219-20-23) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



11.04.2020

Project Manager: Joseph Hernandez

LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): 676707

RDX 17-25

Project Address: NM

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) 676707. 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. 676707 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 676707

LT Environmental, Inc., Arvada, CO

RDX 17-25

 Sample Id
 Matrix
 Date Collected
 Sample Depth
 Lab Sample Id

 CH01 @ 5.5-6'
 S
 10.29.2020 10:55
 5.5 - 6 ft
 676707-001

Xenco

Environment Testing

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 17-25

Project ID: Report Date: 11.04.2020 034820010 Work Order Number(s): 676707 Date Received: 11.02.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 676707

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH01 @ 5.5-6' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676707-001

Date Collected: 10.29.2020 10:55

Sample Depth: 5.5 - 6 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst:

Date Prep:

% Moisture: 11.03.2020 13:00

Basis: Wet Weight

Seq Number: 3141306

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	606	49.9	mg/kg	11.03.2020 15:21		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

CACAnalyst: Seq Number: 3141297 Date Prep: 11.03.2020 13:27 % Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	11.03.2020 16:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	11.03.2020 16:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	11.03.2020 16:21	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	11.03.2020 16:21	U	1
Surrogate	(Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	131	%	70-135	11.03.2020 16:21
o-Terphenyl	84-15-1	117	%	70-135	11.03.2020 16:21

Wet Weight

Certificate of Analytical Results 676707

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH01 @ 5.5-6' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676707-001 Date Collected: 10.29.2020 10:55 Sample Depth: 5.5 - 6 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 11.03.2020 14:07 % Moisture: Basis:

Seq Number: 3141303

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202	mg/kg	11.03.2020 17:47	U	1
Toluene	108-88-3	< 0.00202	0.00202	mg/kg	11.03.2020 17:47	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202	mg/kg	11.03.2020 17:47	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403	mg/kg	11.03.2020 17:47	U	1
o-Xylene	95-47-6	< 0.00202	0.00202	mg/kg	11.03.2020 17:47	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202	mg/kg	11.03.2020 17:47	U	1
Total BTEX		< 0.00202	0.00202	mg/kg	11.03.2020 17:47	U	1
g	C C	N	V D	TT -14 T 1 - 14	A I ! . ID . 4	To large	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.03.2020 17:47	
4-Bromofluorobenzene	460-00-4	89	%	70-130	11.03.2020 17:47	



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.

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

^{**} Surrogate recovered outside laboratory control limit.



QC Summary 676707

LT Environmental, Inc.

RDX 17-25

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3141306

Matrix:

E300P Prep Method:

RPD

Date Prep: 11.03.2020

LCS Sample Id: 7714455-1-BKS LCSD Sample Id: 7714455-1-BSD MB Sample Id: 7714455-1-BLK

LCS MB Spike LCS Limits %RPD Units Analysis LCSD LCSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date Chloride <10.0 250 260 104 259 90-110 0 20 11.03.2020 15:10 104 mg/kg

Solid

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3141306 Parent Sample Id:

676707-001 MS Sample Id: Prep Method: E300P

Date Prep: 11.03.2020 MSD Sample Id: 676707-001 SD

Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis **Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result

676707-001 S

11.03.2020 15:26 Chloride 606 200 796 95 806 100 90-110 1 20 mg/kg

Matrix: Soil

Analytical Method: Inorganic Anions by EPA 300

3141306 Seq Number: Matrix: Soil

E300P Prep Method: 11.03.2020

Date Prep: MS Sample Id: 676720-001 S MSD Sample Id: 676720-001 SD Parent Sample Id: 676720-001

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limite Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 107 20 11.03.2020 16:43 148 200 361 363 108 90-110 1 mg/kg

Analytical Method: TPH by SW8015 Mod

3141297 Seq Number:

Matrix: Solid

SW8015P Prep Method: 11.03.2020

Date Prep:

Flag

7714426-1-BLK LCS Sample Id: 7714426-1-BKS LCSD Sample Id: 7714426-1-BSD MB Sample Id:

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis **Parameter** Result Limit Date Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 11.03.2020 15:40 35 < 50.0 1000 1180 118 1130 113 70-135 4 mg/kg 11.03.2020 15:40 Diesel Range Organics (DRO) 70-135 4 35 < 50.0 1000 1250 125 1200 120 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 11.03.2020 15:40 1-Chlorooctane 122 130 126 70-135 % 11.03.2020 15:40 o-Terphenyl 117 120 118 70-135 %

Analytical Method: TPH by SW8015 Mod

Seq Number: 3141297 Matrix: Solid

SW8015P Prep Method:

Date Prep: 11.03.2020

MB Sample Id: 7714426-1-BLK

MBUnits Analysis Flag **Parameter** Result Date

11.03.2020 15:20 Motor Oil Range Hydrocarbons (MRO) < 50.0 mg/kg

Flag

Flag

Flag

QC Summary 676707

LT Environmental, Inc.

RDX 17-25

 Analytical Method:
 TPH by SW8015 Mod
 Prep Method:
 SW8015P

 Seq Number:
 3141297
 Matrix:
 Soil
 Date Prep:
 11.03.2020

 Parent Sample Id:
 676707-001
 MS Sample Id:
 676707-001 SD
 MSD Sample Id:
 676707-001 SD

RPD **Parent** Spike MS MS Limits %RPD Units Analysis MSD MSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) < 50.3 1010 1050 35 11.03.2020 16:41 1130 112 105 70-135 7 mg/kg 11.03.2020 16:41 1010 70-135 mg/kg Diesel Range Organics (DRO) < 50.3 1150 114 1140 1 35 114

MSD Units Analysis MS MS Limits MSD **Surrogate** %Rec Flag Flag Date %Rec 11.03.2020 16:41 1-Chlorooctane 129 133 70-135 % 105 11.03.2020 16:41 o-Terphenyl 123 70-135 %

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3141303Matrix:SolidDate Prep:11.03.2020

MB Sample Id: 7714462-1-BLK LCS Sample Id: 7714462-1-BKS LCSD Sample Id: 7714462-1-BSD

Parameter	MB	Spike	LCS	LCS	LCSD	LCSD	Limits	%RPD	RPD	Units	Analysis
T ut utilitates	Result	Amount	Result	%Rec	Result	%Rec			Limit		Date
Benzene	< 0.00200	0.100	0.0975	98	0.0945	95	70-130	3	35	mg/kg	11.03.2020 15:44
Toluene	< 0.00200	0.100	0.0952	95	0.0926	93	70-130	3	35	mg/kg	11.03.2020 15:44
Ethylbenzene	< 0.00200	0.100	0.0880	88	0.0861	86	71-129	2	35	mg/kg	11.03.2020 15:44
m,p-Xylenes	< 0.00400	0.200	0.178	89	0.173	87	70-135	3	35	mg/kg	11.03.2020 15:44
o-Xylene	< 0.00200	0.100	0.0872	87	0.0851	85	71-133	2	35	mg/kg	11.03.2020 15:44

MBMB LCS LCS LCSD Limits Units Analysis LCSD **Surrogate** %Rec Flag %Rec Flag %Rec Flag Date 11.03.2020 15:44 1,4-Difluorobenzene 104 100 100 70-130 % 11.03.2020 15:44 4-Bromofluorobenzene 85 70-130 % 88 85

 Analytical Method:
 BTEX by EPA 8021B
 Prep Method:
 SW5035A

 Seq Number:
 3141303
 Matrix:
 Soil
 Date Prep:
 11.03.2020

 Parent Sample Id:
 676707-001
 MS Sample Id:
 676707-001 SD
 MSD Sample Id:
 676707-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	F
Benzene	< 0.00201	0.101	0.129	128	0.117	117	70-130	10	35	mg/kg	11.03.2020 16:29	
Toluene	< 0.00201	0.101	0.123	122	0.111	111	70-130	10	35	mg/kg	11.03.2020 16:29	
Ethylbenzene	< 0.00201	0.101	0.111	110	0.0997	100	71-129	11	35	mg/kg	11.03.2020 16:29	
m,p-Xylenes	< 0.00402	0.201	0.225	112	0.200	100	70-135	12	35	mg/kg	11.03.2020 16:29	
o-Xylene	< 0.00201	0.101	0.109	108	0.0983	98	71-133	10	35	mg/kg	11.03.2020 16:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		99		70-130	%	11.03.2020 16:29
4-Bromofluorobenzene	86		85		70-130	%	11.03.2020 16:29

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 Dupli

 $Log\ Diff. = Log(Sample\ Duplicate) - Log(Original\ Sample)$

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: 676707

Cample Clastory Seales: Yes No. NA Correction Fedor:	S Ba Be B Cd Ca Cr Cc Ba Be Cd Cr Co Cu Pb Relinquished Relinquished Relinquished	Numbe Numbe PH (EP. EP. EP.	Sample Identification Matrix Sampled	Matrix Sampled S IB/Jac/Jap S be analyzed Shment of samples constitution of samples and shall not opplied to each project and Received.	5 - 6 ' S 5 - 6 ' S 10 200.8 / 6020: and Metal(s) to be sument and relinquishme ble only for the cost of sale of \$75.00 will be applied of \$75.00	Sample Identification CHD © 5.5 - 6' S
Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na 30 Mn Mo Ni Se Ag TI U tors, it assigns standard terms and conditions sess are due to circumstances beyond the control be enforced unless previously negotiated. by: (Signature) Received by: (Signature)	X X X X X X X X X X X X X X X X X X X	Numbe Numbe Numbe TPH (EP Numbe TPH (EP Numbe Numbe	Sampled Depth Sampled Time Sampled Time Simpled Time Sim	Matrix Sampled S ip/aa/a S) De analyzed De analyzed Received	fication 5 - 6 ' 0 200.8 / 60 and Metal(s) to unment and relinquis the cost se of \$75.00 will be as	Sample identity CHD © 5.0 Total 200.7 / 601 Circle Method(s) ice: Signature of this docervice. Xenco will be liable enco. A minimum charge Relinquished by: (\$1
Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na 3 Mn Mo Ni Se Ag TI U Mn Mo Ni Se Ag TI U 1631 Ses are due to circumstances beyond the control be enforced unless previously negotiated.	X X X X X X X X X X X X X X X X X X X	Numbe Numbe Numbe Y Numbe Y Numbe Y Numbe	Sampled Depth Sampled Texa: 1955 5.5-6' RCRA 13PPM Texa: TCLP / SPLP 6010: 8F titutes a valid purchase order fire transume any responsibility for a charge of \$5 for each sample	Matrix Sampled Sampled S b/Jaa/Ja Jab D be analyzed D be analyzed Shment of samples cons of samples and shall no polied to each project an	fication 5 - 6' 0 200.8 / 60 and Metal(s) to unment and relinquis e of \$75.00 will be as	Sample identii CHD © 5. Total 200.7 / 601 Circle Method(s) Circle Method or this doc co: Signature of this doc ervice. Xenco will be liab erco. A minimum charge
Ag SiO2 Na 1631	X Ba Be Cd Cr Co C	Number A Sb As	Time Sampled Depth 5 1055 5.5 -6 ' 7 TCLP / SPLP 6010: 8F	Matrix Sampled S ip/aa/ap 120: De analyzed	5 - 6 ' 5 - 6 ' 200.8 / 60 and Metal(s) to	Sample identii CHD © 5.1 Total 200.7 / 601 Circle Method(s)
Sample Comments			Sampled 1655 5.	Dati Samp		Sample identi
Sample Comments			Sampled 1955 5.	Date Samp	5 - 6'	Sample Identi
TAT starts the day received by the lab, if received by 4:30pm Sample Comments			Sampled 1655 5.	Date Samp	5-6'	Sample identif
TAT starts the day received by the lab, if received by 4:30pm Sample Comments	 		Sampled VØ55 5.	Samp	5-6'	Sample Identi
TAT starts the day received by the lab, if received by 4:30pm Sample Comments			Sampled 1955 5.	Samp	5-6'	Sample Identi
TAT starts the day received by the lab, if received by 4:30pm Sample Comments			Time Sampled 1655 5.	Samp	5 - 6'	Sample Identi
TAT starts the day received by the lab, if received by 4:30pm Sample Comments			Time Sampled 1055 5.	Dat Samp	fication	Sample Identii
TAT starts the day received by the lab, if received by 4:30pm Sample Comments			Time Sampled 1055 5.	Dat Samp	fication 5 – 6'	Sample Identi
TAT starts the day received by the lab, if received by 4:30pm Sample Comments			Time Sampled VØ55 5.	Dat Samp	fication 5 - 6'	Sample Identi
TAT starts the day received by the lab, if received by 4:30pm Sample Comments			Time Sampled 1Ø55 5.	Dat Samp	fication 5 - 6'	Sample Identii
TAT starts the day received by the lab, if received by 4:30pm Sample Comments			Time Sampled	Dat	fication	Sample Identii
TAT starts the day received by the lab, if received by 4:30pm			Time	Data		
TAT starts the day received by the	(EPA		Total Containers:	WA	s. res No	Campie Custody Sedis
			Correction Factor: -0-7	NA	res	Sample Custody Seals
			TNIMOU	No.	. (C)	Received intact:
	0)		I hermometer ID	6	+	reliperature (v).
		ırs		Cilip Dialin. Tes INO	-	emperature (°C):
						SAMPI F RECEIPT
			Due Date:		Anna Byers	Sampler's Name: /
					Liner	P.O. Number:
			Routine 🛱		034820010	Project Number:
ANALYSIS REQUEST Work Order Notes			Turn Around		RDX 17-25	Project Name:
her:	Email: jhernandez@ltenv.com & abyers@ltenv.com	z@ltenv.com 8	Email: jhernande		281-702-2329	Phone:
Reporting:Level II ☐\$T/UST T☐kP ☐el IV	Carlsbad, NM 88220	3.00.1	City, State ZIP:	705	Midland, TX 79705	City, State ZIP:
	5315 Buena Vista Dr		Address:	Street	3300 North A Street	Address:
Program: UST/PST RP rownfields FC perfund	WPX Energy	1000	Company Name:	ntal, Inc.	LT Environmental, Inc	Company Name:
Work Order Comments	Lynda Laumbach		Bill to: (if different)	ndez	Joseph Hernandez	Project Manager:

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 11.02.2020 03.50.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 676707

Analyst:

Temperature Measuring device used: T_NM_007

Date: 11.03.2020

	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 contain	ner/ 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 relinquish	ed/ received?	Yes	
#10 Chain of Custody agrees with sample la	bels/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 t	est(s)?	Yes	
#16 All samples received within hold time?		Yes	
#17 Subcontract of sample(s)?		No	
#18 Water VOC samples have zero headsp	ace?	N/A	

* Must be completed for	after-hours deliver	v of samples prior t	o placing in the	refrigerator
Must be combleted for	alter-mours acriver	V OI SAIIIDIGS DITOI I	o biacilia ili tile	i eli idei atoi

Checklist completed by:	Cloe Clifton	Date: <u>11.03.2020</u>	_
Checklist reviewed by:	lossing Vermer		

Jessica Kramer

PH Device/Lot#:

Page 129 of 190

Certificate of Analysis Summary 676709

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-25

Project Id:

034820029

Joseph Hernandez

Date Received in Lab: Mon 11.02.2020 15:50

Contact:

20029

Report Date: 11.05.2020 08:11

Project Location: NM Project Manager: Jessica Kramer

	1		I	I		I
	Lab Id:	676709-001				
Analysis Requested	Field Id:	CH02 @ 1-1.5'				
71nuiysis Requesicu	Depth:	1-1.5 ft				
	Matrix:	SOIL				
	Sampled:	10.29.2020 11:35				
BTEX by EPA 8021B	Extracted:	11.03.2020 09:30				
	Analyzed:	11.03.2020 18:37				
	Units/RL:	mg/kg RL				
Benzene		< 0.00201 0.00201				
Toluene		0.00783 0.00201				
Ethylbenzene		0.0187 0.00201				
m,p-Xylenes		0.0368 0.00402				
o-Xylene		0.0433 0.00201				
Total Xylenes		0.0801 0.00201				
Total BTEX		0.107 0.00201				
Inorganic Anions by EPA 300	Extracted:	11.03.2020 13:00				
	Analyzed:	11.03.2020 15:43				
	Units/RL:	mg/kg RL				
Chloride		342 10.0				
TPH by SW8015 Mod	Extracted:	11.03.2020 13:27				
	Analyzed:	11.03.2020 17:42				
	Units/RL:	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2				
Diesel Range Organics (DRO)		<50.2 50.2				
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2				
Total TPH		<50.2 50.2				
·					 	

BRL - Below Reporting Limit

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

Jessica Vramer

Analytical Report 676709

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

RDX 17-25 034820029 11.05.2020

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 (T104704219-20-23) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



11.05.2020

Project Manager: Joseph Hernandez

LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): 676709

RDX 17-25

Project Address: NM

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) 676709. 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. 676709 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 676709

LT Environmental, Inc., Arvada, CO

RDX 17-25

 Sample Id
 Matrix
 Date Collected
 Sample Depth
 Lab Sample Id

 CH02 @ 1-1.5'
 S
 10.29.2020 11:35
 1 - 1.5 ft
 676709-001

Xenco

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 17-25

 Project ID:
 034820029
 Report Date:
 11.05.2020

 Work Order Number(s):
 676709
 Date Received:
 11.02.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 676709

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH02 @ 1-1.5' Matrix: Soil

Date Received:11.02.2020 15:50

Lab Sample Id: 676709-001

Date Collected: 10.29.2020 11:35

Sample Depth: 1 - 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

Tech:

MAB

MAB Analyst:

Date Prep:

11.03.2020 13:00

% Moisture:

Basis: Wet Weight

Prep Method: SW8015P

Seq Number: 3141306

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	342	10.0	mg/kg	11.03.2020 15:43		1

Analytical Method: TPH by SW8015 Mod

MAB

CACAnalyst: Seq Number: 3141297 Date Prep: 11.03.2020 13:27 % Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.2	50.2		mg/kg	11.03.2020 17:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.2	50.2		mg/kg	11.03.2020 17:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	11.03.2020 17:42	U	1
Total TPH	PHC635	< 50.2	50.2		mg/kg	11.03.2020 17:42	U	1
Surrogate	C	as Number %	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	134	%	70-135	11.03.2020 17:42
o-Terphenyl	84-15-1	127	%	70-135	11.03.2020 17:42

Certificate of Analytical Results 676709

LT Environmental, Inc., Arvada, CO

RDX 17-25

Soil

Sample Id: CH02 @ 1-1.5' Matrix:

Date Received:11.02.2020 15:50

Lab Sample Id: 676709-001 Date Collected: 10.29.2020 11:35

Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Basis: Wet Weight

Seq Number: 3141311

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	11.03.2020 18:37	U	1
Toluene	108-88-3	0.00783	0.00201		mg/kg	11.03.2020 18:37		1
Ethylbenzene	100-41-4	0.0187	0.00201		mg/kg	11.03.2020 18:37		1
m,p-Xylenes	179601-23-1	0.0368	0.00402		mg/kg	11.03.2020 18:37		1
o-Xylene	95-47-6	0.0433	0.00201		mg/kg	11.03.2020 18:37		1
Total Xylenes	1330-20-7	0.0801	0.00201		mg/kg	11.03.2020 18:37		1
Total BTEX		0.107	0.00201		mg/kg	11.03.2020 18:37		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	98	%	70-130	11.03.2020 18:37		
4-Bromofluorobenzene		460-00-4	120	%	70-130	11.03.2020 18:37		



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.

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

^{**} Surrogate recovered outside laboratory control limit.

Flag

Flag

QC Summary 676709

LT Environmental, Inc.

RDX 17-25

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3141306

Spike

Matrix: Solid

E300P Prep Method: Date Prep: 11.03.2020

LCS Sample Id: 7714455-1-BKS MB Sample Id: 7714455-1-BLK

LCSD Sample Id: 7714455-1-BSD

LCS RPD MB Spike LCS Limits %RPD Units Analysis LCSD LCSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date 11.03.2020 15:10

Chloride <10.0 250 260 104 259 90-110 0 20 104 mg/kg

MS

Analytical Method: Inorganic Anions by EPA 300

Parent

Seq Number: 3141306 Matrix: Soil

Prep Method: E300P

Date Prep: 11.03.2020

Units

Analysis

676707-001 S 676707-001 MS Sample Id: MSD Sample Id: 676707-001 SD Parent Sample Id: MS

Parameter Flag Result Amount Result %Rec %Rec Limit Date Result 11.03.2020 15:26 Chloride 606 200 796 95 806 100 90-110 1 20 mg/kg

MSD

MSD

Limits

Analytical Method: Inorganic Anions by EPA 300

3141306 Seq Number:

E300P Prep Method:

RPD

%RPD

Date Prep: 11.03.2020

Matrix: Soil MS Sample Id: 676720-001 S MSD Sample Id: 676720-001 SD Parent Sample Id: 676720-001

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limite Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 107 20 11.03.2020 16:43 148 200 361 363 108 90-110 1 mg/kg

Analytical Method: TPH by SW8015 Mod

3141297 Seq Number:

Matrix: Solid

SW8015P Prep Method:

Date Prep: 11.03.2020

7714426-1-BLK LCS Sample Id: 7714426-1-BKS LCSD Sample Id: 7714426-1-BSD MB Sample Id:

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis **Parameter** Result Limit Date Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 11.03.2020 15:40 35 < 50.0 1000 1180 118 1130 113 70-135 4 mg/kg 11.03.2020 15:40 Diesel Range Organics (DRO) 70-135 4 35 < 50.0 1000 1250 125 1200 120 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 11.03.2020 15:40 1-Chlorooctane 122 130 126 70-135 % 11.03.2020 15:40 o-Terphenyl 117 120 118 70-135 %

Analytical Method: TPH by SW8015 Mod

Seq Number: 3141297 Matrix: Solid

Prep Method: Date Prep: SW8015P 11.03.2020

MB Sample Id: 7714426-1-BLK

MB**Parameter** Result

Units

Analysis Flag Date

Motor Oil Range Hydrocarbons (MRO) < 50.0

mg/kg

11.03.2020 15:20

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

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result

= MSD/LCSD Result

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

Flag

Flag

SW8015P

11.03.2020

QC Summary 676709

LT Environmental, Inc.

RDX 17-25

Analytical Method:TPH by SW8015 ModPrep Method:Seq Number:3141297Matrix: SoilDate Prep:

Parent Sample Id: 676707-001 MS Sample Id: 676707-001 S MSD Sample Id: 676707-001 SD

Parameter	Parent	Spike	MS	MS	MSD	MSD	Limits	%RPD	RPD	Units	Analysis
ranameter	Result	Amount	Result	%Rec	Result	%Rec			Limit		Date
Gasoline Range Hydrocarbons (GRO)	< 50.3	1010	1130	112	1050	105	70-135	7	35	mg/kg	11.03.2020 16:41
Diesel Range Organics (DRO)	< 50.3	1010	1150	114	1140	114	70-135	1	35	mg/kg	11.03.2020 16:41

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		133		70-135	%	11.03.2020 16:41
o-Terphenyl	123		105		70-135	%	11.03.2020 16:41

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3141311
 Matrix:
 Solid
 Date Prep:
 11.03.2020

 MB Sample Id:
 7714461-1-BLK
 LCS Sample Id:
 7714461-1-BKS
 LCSD Sample Id:
 7714461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	11.03.2020 09:56
Toluene	< 0.00200	0.100	0.0955	96	0.101	101	70-130	6	35	mg/kg	11.03.2020 09:56
Ethylbenzene	< 0.00200	0.100	0.0976	98	0.102	102	71-129	4	35	mg/kg	11.03.2020 09:56
m,p-Xylenes	< 0.00400	0.200	0.197	99	0.205	103	70-135	4	35	mg/kg	11.03.2020 09:56
o-Xylene	< 0.00200	0.100	0.0967	97	0.102	102	71-133	5	35	mg/kg	11.03.2020 09:56

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		99		104		70-130	%	11.03.2020 09:56
4-Bromofluorobenzene	110		103		110		70-130	%	11.03.2020 09:56

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3141311Matrix: SoilDate Prep:11.03.2020

Parent Sample Id: 676514-007 MS Sample Id: 676514-007 S MSD Sample Id: 676514-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00201	0.101	0.107	106	0.0886	89	70-130	19	35	mg/kg	11.03.2020 10:41	
Toluene	< 0.00201	0.101	0.0986	98	0.0879	88	70-130	11	35	mg/kg	11.03.2020 10:41	
Ethylbenzene	< 0.00201	0.101	0.0998	99	0.0910	91	71-129	9	35	mg/kg	11.03.2020 10:41	
m,p-Xylenes	< 0.00402	0.201	0.202	100	0.186	93	70-135	8	35	mg/kg	11.03.2020 10:41	
o-Xylene	< 0.00201	0.101	0.102	101	0.0943	94	71-133	8	35	mg/kg	11.03.2020 10:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		70-130	%	11.03.2020 10:41
4-Bromofluorobenzene	107		117		70-130	%	11.03.2020 10:41

			(v)	ار ا	7		9	
Date/Time	Received by: (Signature)	Kelinquisned by: (Signature)	Date Illie	7/-		\wedge		ann
	are due to circumstances beyond the control enforced unless previously negotiated.	the client if such losses are due to circum zed. These terms will be enforced unless	of Xence. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xence, but not analyzed. These terms will be Received by: (Signature) Received by: (Signature)	5 for each sample subn	ch project and a charge of \$5 for	00 will be applied to each	Relinquished by: (Signature)	Relinc
Na Sr Tl Sn U V Zn 1631/245.1/7470/7471: Hg	Mo Ni K Se Ag SiO2	Cd Ca Cr Co Cu Fe Pb Mg Mn Cr Co Cu Pb Mn Mo Ni Se Ag listes and subcontractors. It assigns standard to	Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb M. Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors.	RCRA 13PPM Texas 11 / TCLP / SPLP 6010: 8RCRA litutes a valid purchase order from client	8RCRA 10	Circle Method(s) and Metal(s) to be analyzed Signature of this document and relinquishment of samples vice. Xenco will be liable only for the cost of samples and a b	Circle Method(s) and N e: Signature of this document a	Circ
						-		Total
	/							
								/
			_ × ×	1-1.5	5511 He/2010	U	CHOT @ 1-1.	(1
Sample Comments	S		TPH (Depth	Sampled Sampled	Matrix	e ideniincati	
TAT starts the day recevied by the lab, if received by 4:30pm	TAT s		EPA 80		Total Containers:	res (No	Sample Custody Seals:	Saldille
			015 8021	-0-2	Correction Factor:	8	Cooler Custody Seals:	Cooler
			Mod	7	THINGO	Ses Z	intact:	Cooler Cristatu
			1)	(Thermometer ID	1	Temperature (°C):	Temper
				(Yes) No	Yes No Wet Ice:	mp Blank:	SAMPLE RECEIPT	SAM
				Due Date:	Du	Byers	Sampler's Name: Anna Byers	Sample
				Rush:	RL			P.O. Number:
				Routine W	Ro	20010	Project Number: 034820010	Project
Work Order Notes		ANALYSIS REQUEST		Turn Around		17-25		Project Name:
2	☐ ADaPT □		Email: jhernandez@ltenv.com & abyers@ltenv.com	ail: jhernandez@l	Em	281-702-2329	281-7	Phone:
TRP LTellV	Bvel III □}T/UST		Carlsbad, NM 88220	City, State ZIP:		Midland, TX 79705	City, State ZIP: Midla	City, S
- Chemina		Dr		Address:		3300 North A Street		Address:
	Program: UST/PST RP rownfields			Company Name:		LT Environmental, Inc.	/ Name:	Compa
	Work Order Com		Lynda Laumbach	Bill to: (if different)		Joseph Hernandez		Projec
	WAR VODO	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa FI (813-620-2000)	440) EL Paso, IX (915)585. AZ (480-355-0900) Atlanta.	-392-7550) Phoenix,	Hobbs,NM (578			
01010	WORK Order No:	Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334	200 Dallas,TX (214) 902-0300 San Antonio,T	uston, TX (281) 240-42	- H	ABORATORIES	LABOR	
1 1	Mark Order No.	VIOLOUV V						ĺ

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 11.02.2020 03.50.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 676709

Analyst:

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 contain	ner/ 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 relinquish	ned/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/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 headsp	ace?	N/A	

Must be completed for	after-hours deliver	v of samples prior to	nlacing in the	refrigerator
Must be completed for	aitei-ilouis delivei	V OI SAIIIDIES DI IOI K	J DIACILIA III LIIC	i eli idei albi

Checklist completed by:	Cloe Clifton	Date: <u>11.03.2020</u>	_
Checklist reviewed by:	Jessica Vramer	Date: 11 03 2020	

Jessica Kramer

PH Device/Lot#:

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Certificate of Analysis Summary 676712

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-25

Project Id:

034820029

NM

Contact: Project Location: Joseph Hernandez

Date Received in Lab: Mon 11.02.2020 15:50 **Report Date:** 11.05.2020 08:14

Project Manager: Jessica Kramer

Project Location:					Froject W.	ianager: Jessica Krai	ner
Analysis Requested	Lab Id:	676712-0	001				
	Field Id:	CH02 @ 1.:	5- 2'				
	Depth:	1.5-2 ft	t				
	Matrix:	SOIL					
	Sampled:	10.29.2020	11:48				
BTEX by EPA 8021B	Extracted:	11.03.2020	09:30				
	Analyzed:	11.04.2020	10:23				
	Units/RL:	mg/kg	RL				
Benzene		< 0.0196	0.0196				
Toluene		< 0.0196	0.0196				
Ethylbenzene		0.0667	0.0196				
m,p-Xylenes		0.377	0.0392				
o-Xylene		0.150	0.0196				
Total Xylenes		0.527	0.0196				
Total BTEX		0.594	0.0196				
Inorganic Anions by EPA 300	Extracted:	11.03.2020 13:00					
	Analyzed:	11.03.2020 15:54					
	Units/RL:	mg/kg	RL				
Chloride		660	10.0				
TPH by SW8015 Mod	Extracted:	11.03.2020	13:27				
	Analyzed:	11.03.2020	18:22				
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		88.2	50.0				
Diesel Range Organics (DRO)		748	50.0				
Motor Oil Range Hydrocarbons (MRO)		59.4	50.0				
Total TPH		896	50.0				

BRL - Below Reporting Limit

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

Jessica Wramer

Analytical Report 676712

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

RDX 17-25 034820029 11.05.2020

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 (T104704219-20-23) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



11.05.2020

Project Manager: Joseph Hernandez

LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): 676712

RDX 17-25

Project Address: NM

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) 676712. 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. 676712 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 676712

LT Environmental, Inc., Arvada, CO

RDX 17-25

 Sample Id
 Matrix
 Date Collected
 Sample Depth
 Lab Sample Id

 CH02 @ 1.5- 2'
 S
 10.29.2020 11:48
 1.5 - 2 ft
 676712-001

Xenco

Environment Testing

CASE NARRATIVE

Page 145 of 190

Client Name: LT Environmental, Inc.

Project Name: RDX 17-25

Project ID: Report Date: 11.05.2020 034820029 Work Order Number(s): 676712 Date Received: 11.02.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Xenco

Certificate of Analytical Results 676712

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH02 @ 1.5- 2' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676712-001

Date Collected: 10.29.2020 11:48

Sample Depth: 1.5 - 2 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

MAB Tech:

Date Prep:

11.03.2020 13:00

% Moisture:

Basis:

Seq Number: 3141306

Analyst:

MAB

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	660	10.0	mg/kg	11.03.2020 15:54		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

11.03.2020 18:22

Tech:

MAB

CACAnalyst: Seq Number: 3141297

o-Terphenyl

Date Prep:

11.03.2020 13:27

% Moisture:

Basis:

70-135

Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	88.2	50.0		mg/kg	11.03.2020 18:22		1
Diesel Range Organics (DRO)	C10C28DRO	748	50.0		mg/kg	11.03.2020 18:22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	59.4	50.0		mg/kg	11.03.2020 18:22		1
Total TPH	PHC635	896	50.0		mg/kg	11.03.2020 18:22		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	125	%	70-135	11.03.2020 18:22		

133

84-15-1

Certificate of Analytical Results 676712

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: **CH02** @ **1.5-2**'

Matrix: Soil

Date Received:11.02.2020 15:50

Lab Sample Id: 676712-001

Date Collected: 10.29.2020 11:48

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 11.03.2020 09:30

% Moisture:

Seq Number: 3141311

Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.0196	0.0196		mg/kg	11.04.2020 10:23	U	1
Toluene	108-88-3	< 0.0196	0.0196		mg/kg	11.04.2020 10:23	U	1
Ethylbenzene	100-41-4	0.0667	0.0196		mg/kg	11.04.2020 10:23		1
m,p-Xylenes	179601-23-1	0.377	0.0392		mg/kg	11.04.2020 10:23		1
o-Xylene	95-47-6	0.150	0.0196		mg/kg	11.04.2020 10:23		1
Total Xylenes	1330-20-7	0.527	0.0196		mg/kg	11.04.2020 10:23		1
Total BTEX		0.594	0.0196		mg/kg	11.04.2020 10:23		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	95	%	70-130	11.04.2020 10:23		
4-Bromofluorobenzene		460-00-4	106	%	70-130	11.04.2020 10:23		



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

Flag



MB Sample Id:

QC Summary 676712

LT Environmental, Inc.

RDX 17-25

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3141306

Matrix: Solid LCS Sample Id: 7714455-1-BKS 7714455-1-BLK

E300P Prep Method: Date Prep: 11.03.2020

Prep Method:

RPD

Prep Method:

Units

Analysis

%RPD

Limite

LCSD Sample Id: 7714455-1-BSD

E300P

LCS RPD MB Spike LCS Limits %RPD Units Analysis LCSD LCSD **Parameter**

Result Amount Result %Rec Result %Rec Limit Date Chloride <10.0 250 260 104 259 90-110 0 20 11.03.2020 15:10 104 mg/kg

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3141306 Matrix: Soil Date Prep: 11.03.2020 676707-001 S 676707-001 MS Sample Id: MSD Sample Id: 676707-001 SD

Parent Sample Id: Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis

Parameter Flag Result Amount Result %Rec %Rec Limit Date Result 11.03.2020 15:26 Chloride 606 200 796 95 806 100 90-110 1 20 mg/kg

Analytical Method: Inorganic Anions by EPA 300

Parent

E300P Prep Method: 3141306 Seq Number: Matrix: Soil Date Prep: 11.03.2020

MS

MS Sample Id: 676720-001 S MSD Sample Id: 676720-001 SD Parent Sample Id: 676720-001 MS

Spike MSD **MSD** Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 107 20 11.03.2020 16:43 148 200 361 363 108 90-110 1 mg/kg

Analytical Method: TPH by SW8015 Mod

SW8015P Prep Method: 3141297 Matrix: Solid Seq Number: Date Prep: 11.03.2020

7714426-1-BLK LCS Sample Id: 7714426-1-BKS LCSD Sample Id: 7714426-1-BSD MB Sample Id:

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 11.03.2020 15:40 35 < 50.0 1000 1180 118 1130 113 70-135 4 mg/kg 11.03.2020 15:40 Diesel Range Organics (DRO) 70-135 4 35 < 50.0 1000 1250 125 1200 120 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 11.03.2020 15:40 1-Chlorooctane 122 130 126 70-135 % 11.03.2020 15:40 o-Terphenyl 117 120 118 70-135 %

Analytical Method: TPH by SW8015 Mod

Seq Number: 3141297 Matrix: Solid Date Prep: 11.03.2020

MB Sample Id: 7714426-1-BLK

MBUnits Analysis Flag **Parameter** Result Date

11.03.2020 15:20 Motor Oil Range Hydrocarbons (MRO) < 50.0 mg/kg

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

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result

= MSD/LCSD Result

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

SW8015P

Flag

Flag

QC Summary 676712

LT Environmental, Inc.

RDX 17-25

Analytical Method: TPH by SW8015 Mod

Seq Number: 3141297 Matrix: Soil Date Prep: 11.03.2020

MS Servels Ltt. 676707 001 S. MSD Servels Ltt. 676707 001 S.

Parent Sample Id: 676707-001 MS Sample Id: 676707-001 S MSD Sample Id: 676707-001 SD

RPD **Parent** Spike MS MS Limits %RPD Units Analysis MSD MSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) < 50.3 1010 1050 35 11.03.2020 16:41 1130 112 105 70-135 7 mg/kg 11.03.2020 16:41 1010 70-135 mg/kg Diesel Range Organics (DRO) < 50.3 1150 114 1140 1 35 114

MSD Units MS MS Limits Analysis MSD **Surrogate** %Rec Flag Flag Date %Rec 11.03.2020 16:41 1-Chlorooctane 129 133 70-135 % 105 11.03.2020 16:41 o-Terphenyl 123 70-135 %

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
Sea Number: 3141311 Matrix: Solid Prep: 11.03.2020

 Seq Number:
 3141311
 Matrix:
 Solid
 Date Prep:
 11.03.2020

 MB Sample Id:
 7714461-1-BLK
 LCS Sample Id:
 7714461-1-BKS
 LCSD Sample Id:
 7714461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	11.03.2020 09:56
Toluene	< 0.00200	0.100	0.0955	96	0.101	101	70-130	6	35	mg/kg	11.03.2020 09:56
Ethylbenzene	< 0.00200	0.100	0.0976	98	0.102	102	71-129	4	35	mg/kg	11.03.2020 09:56
m,p-Xylenes	< 0.00400	0.200	0.197	99	0.205	103	70-135	4	35	mg/kg	11.03.2020 09:56
o-Xylene	< 0.00200	0.100	0.0967	97	0.102	102	71-133	5	35	mg/kg	11.03.2020 09:56

MBMB LCS LCS LCSD Limits Units Analysis LCSD **Surrogate** %Rec Flag %Rec Flag %Rec Flag Date 11.03.2020 09:56 1,4-Difluorobenzene 104 99 104 70-130 % 11.03.2020 09:56 4-Bromofluorobenzene 103 110 70-130 % 110

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3141311Matrix: SoilDate Prep:11.03.2020

Parent Sample Id: 676514-007 MS Sample Id: 676514-007 S MSD Sample Id: 676514-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00201	0.101	0.107	106	0.0886	89	70-130	19	35	mg/kg	11.03.2020 10:41	
Toluene	< 0.00201	0.101	0.0986	98	0.0879	88	70-130	11	35	mg/kg	11.03.2020 10:41	
Ethylbenzene	< 0.00201	0.101	0.0998	99	0.0910	91	71-129	9	35	mg/kg	11.03.2020 10:41	
m,p-Xylenes	< 0.00402	0.201	0.202	100	0.186	93	70-135	8	35	mg/kg	11.03.2020 10:41	
o-Xylene	< 0.00201	0.101	0.102	101	0.0943	94	71-133	8	35	mg/kg	11.03.2020 10:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		70-130	%	11.03.2020 10:41
4-Bromofluorobenzene	107		117		70-130	%	11.03.2020 10:41

E = MSD/LCSD Result

Chain of Custody

Work Order No: 676717

nature) Date/Time						'	
		2	11/2/20 15:50	i i	70		lum h
	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	gnature)	Received by: (Signature)	ture)	Relinquished by: (Signature)
	ctors. It assigns standard terms and conditions ses are due to circumstances beyond the control be enforced unless previously negotiated.	of service. Xenco will be liable only for the cost of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	lient company to Xenco, its at losses or expenses incurred b bmitted to Xenco, but not ana	valid purchase order from c any responsibility for any I ge of \$5 for each sample su	samples constitutes a seand shall not assume sach project and a char	for the cost of sample. 5.00 will be applied to	of service. Xenco will be liable only for the cost of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontrated of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such los of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will
2 Na Sr Tl Sn U V Zn 1631/245.1/7470 /7471: Hg	Mg Mn Mo Ni K Se Ag SiO2 Na Se Ag TI U 163	Mn Mo Ni	A Sb As Ba Be B	RCRA 13PPM Texas 11 / TCLP / SPLP 6010: 8RCRA	8RCRA alyzed TCLP /	200.8 / 6020: Metal(s) to be an	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed
		(
			/				
			- × ×	8 1.5-2'	SHII DE/UDA	2' 5	CHØ2@1.5
Sample Comments			TPH (E BTEX (Time Depth	Date Time Sampled Sampled	on Matrix	Sample Identification
lab, if received by 4:30pm			PA 80	ainers:	Total Containers:	Yes No N/A	Sample Custody Seals:
TAT stads the day provided by the			015 I 8021	actor: -0-2	Correction Factor:	Yes ANO N/A	Cooler Custody Seals:
			Mod B)	1007	THIM.	(Yes No	Received Intact:
)	Thermometer ID	Therm	1-21-0	Temperature (°C):
				Wet Ice: Yes No	(Yes) No	Temp Blank:	SAMPLE RECEIPT
				Due Date:		Byers	Sampler's Name: Anna Byers
				Rush: (P.O. Number: Liner
				Routine X		0010	Project Number: 034820010
Work Order Notes		ANALYSIS REQUEST		Turn Around		17-25	Project Name: RDX 17-25
ADaPT Other:	Deliverables: EDD /		Email: jhernandez@ltenv.com & abyers@ltenv.com	Email: jhernandez@		281-702-2329	Phone: 281-7
BT/UST TORP UDeLIV □	Reporting:Level II		Carlsbad, NM 88220	City, State ZIP:		Midland, TX 79705	City, State ZIP: Midla
			5315 Buena Vista Dr	Address:		3300 North A Street	Address: 3300
_rownfields R_C ¶perfund [Program: UST/PST RP	9	e: WPX Energy	Company Name:		LT Environmental, Inc	Company Name: LT E
Work Order Comments	Work Or		t) Lynda Laumbach	Bill to: (if different)		Joseph Hernandez	Project Manager: Jose

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 11.02.2020 03.50.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 676712

Analyst:

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 contai	ner/ 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 relinquish	ed/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/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 headsp	ace?	N/A	

* Must be	completed for	after-hours	delivery of	samples	prior to	placing in	the r	efrigerato	16

Checklist completed by:	Cloe Clifton	Date: <u>11.03.2020</u>	
Checklist reviewed by:	Jessica Vramer	Date: 11.03.2020	

Jessica Kramer

PH Device/Lot#:

eurofins Environment Testing

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Certificate of Analysis Summary 676713

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-25

Project Id:

034820010

Date Received in Lab: Mon 11.02.2020 15:50

Contact:

Joseph Hernandez

Report Date: 11.05.2020 08:36

Project Location:

NM

Project Manager: Jessica Kramer

	Lab Id:	676713-001			
Analysis Requested	Field Id:	CH02 @3.5-4'			
Thulysis Requesicu	Depth:	3.5-4 ft			
	Matrix:	SOIL			
	Sampled:	10.29.2020 12:10			
BTEX by EPA 8021B	Extracted:	11.03.2020 09:30			
	Analyzed:	11.03.2020 19:44			
	Units/RL:	mg/kg RL			
Benzene		<0.00202 0.00202			
Toluene		0.0244 0.00202			
Ethylbenzene		0.0502 0.00202			
m,p-Xylenes		0.437 0.00403			
o-Xylene		0.135 0.00202			
Total Xylenes		0.572 0.00202			
Total BTEX		0.647 0.00202			
Inorganic Anions by EPA 300	Extracted:	11.03.2020 13:00			
	Analyzed:	11.03.2020 16:10			
	Units/RL:	mg/kg RL			
Chloride	_	212 10.0			
TPH by SW8015 Mod	Extracted:	11.03.2020 13:27			
	Analyzed:	11.03.2020 18:43			
	Units/RL:	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		60.4 50.2	_		
Diesel Range Organics (DRO)		298 50.2			
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2			
Total TPH		358 50.2			
				•	

BRL - Below Reporting Limit

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

Jessica Weamer



Analytical Report 676713

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

RDX 17-25 034820010 11.05.2020

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 (T104704219-20-23) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



11.05.2020

Project Manager: Joseph Hernandez

LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): 676713

RDX 17-25

Project Address: NM

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) 676713. 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. 676713 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 676713

LT Environmental, Inc., Arvada, CO

RDX 17-25

 Sample Id
 Matrix
 Date Collected
 Sample Depth
 Lab Sample Id

 CH02 @3.5-4'
 S
 10.29.2020 12:10
 3.5 - 4 ft
 676713-001

Xenco

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 17-25

 Project ID:
 034820010
 Report Date:
 11.05.2020

 Work Order Number(s):
 676713
 Date Received:
 11.02.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Xenco

Certificate of Analytical Results 676713

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: **CH02** @**3.5-4**'

Matrix: Soil

Date Received:11.02.2020 15:50

Lab Sample Id: 676713-001

Date Collected: 10.29.2020 12:10

Sample Depth: 3.5 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:
Analyst:

MAB

MAB

Seq Number: 3141306

Date Prep:

11.03.2020 13:00

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	212	10.0	mg/kg	11.03.2020 16:10		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

Analyst: CAC Seq Number: 3141297 Date Prep: 11.03.2020 13:27

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	60.4	50.2		mg/kg	11.03.2020 18:43		1
Diesel Range Organics (DRO)	C10C28DRO	298	50.2		mg/kg	11.03.2020 18:43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	11.03.2020 18:43	U	1
Total TPH	PHC635	358	50.2		mg/kg	11.03.2020 18:43		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Wet Weight

Certificate of Analytical Results 676713

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH02 @3.5-4' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676713-001 Date Collected: 10.29.2020 12:10 Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Seq Number: 3141311

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202	mg/kg	11.03.2020 19:44	U	1
Toluene	108-88-3	0.0244	0.00202	mg/kg	11.03.2020 19:44		1
Ethylbenzene	100-41-4	0.0502	0.00202	mg/kg	11.03.2020 19:44		1
m,p-Xylenes	179601-23-1	0.437	0.00403	mg/kg	11.03.2020 19:44		1
o-Xylene	95-47-6	0.135	0.00202	mg/kg	11.03.2020 19:44		1
Total Xylenes	1330-20-7	0.572	0.00202	mg/kg	11.03.2020 19:44		1
Total BTEX		0.647	0.00202	mg/kg	11.03.2020 19:44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.03.2020 19:44	
1,4-Difluorobenzene	540-36-3	88	%	70-130	11.03.2020 19:44	



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

QC Summary 676713

LT Environmental, Inc.

RDX 17-25

7714455-1-BKS

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3141306

7714455-1-BLK

Solid

E300P Prep Method:

Date Prep: 11.03.2020

LCSD Sample Id: 7714455-1-BSD

LCS Sample Id: LCS RPD MB Spike LCS Limits %RPD Units LCSD LCSD **Parameter** Result Limit

Matrix:

Result Amount %Rec Result %Rec Chloride <10.0 250 260 104 259 90-110 0 20 11.03.2020 15:10 104 mg/kg

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3141306

MB Sample Id:

Matrix: Soil

Prep Method: Date Prep: 11.03.2020

E300P

Analysis

Date

Flag

Flag

Flag

676707-001 S 676707-001 MS Sample Id: MSD Sample Id: 676707-001 SD Parent Sample Id:

Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis **Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result

11.03.2020 15:26 Chloride 606 200 796 95 806 100 90-110 1 20 mg/kg

Analytical Method: Inorganic Anions by EPA 300

3141306 Seq Number:

Prep Method:

E300P

Matrix: Soil Date Prep: 11.03.2020 Parent Sample Id: 676720-001

MS Sample Id: 676720-001 S MSD Sample Id: 676720-001 SD

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limite Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 107 20 11.03.2020 16:43 148 200 361 363 108 90-110 1 mg/kg

Analytical Method: TPH by SW8015 Mod

3141297 Seq Number:

7714426-1-BLK

Matrix: Solid

Date Prep:

SW8015P

Prep Method: 11.03.2020

LCS Sample Id: 7714426-1-BKS LCSD Sample Id: 7714426-1-BSD MB Sample Id:

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis **Parameter** Result Limit Date Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 11.03.2020 15:40 35 < 50.0 1000 1180 118 1130 113 70-135 4 mg/kg 11.03.2020 15:40 Diesel Range Organics (DRO) 70-135 4 35 < 50.0 1000 1250 125 1200 120 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 11.03.2020 15:40 1-Chlorooctane 122 130 126 70-135 % 11.03.2020 15:40 o-Terphenyl 117 120 118 70-135 %

Analytical Method: TPH by SW8015 Mod

Seq Number: 3141297

Motor Oil Range Hydrocarbons (MRO)

Matrix: Solid

Prep Method:

SW8015P

Date Prep: 11.03.2020

MB Sample Id: 7714426-1-BLK

Parameter

MBResult < 50.0

Units

Analysis Date

11.03.2020 15:20 mg/kg

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

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result

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

Flag

Flag

Flag

QC Summary 676713

LT Environmental, Inc.

RDX 17-25

Analytical Method:TPH by SW8015 ModPrep Method:SW8015PSeq Number:3141297Matrix:SoilDate Prep:11.03.2020

Parent Sample Id: 676707-001 MS Sample Id: 676707-001 S MSD Sample Id: 676707-001 SD

RPD **Parent** Spike MS MS Limits %RPD Units Analysis MSD MSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) < 50.3 1010 1050 35 11.03.2020 16:41 1130 112 105 70-135 7 mg/kg 11.03.2020 16:41 1010 70-135 mg/kg Diesel Range Organics (DRO) < 50.3 1150 114 1140 1 35 114

MSD Units Analysis MS MS Limits MSD **Surrogate** %Rec Flag Flag Date %Rec 11.03.2020 16:41 1-Chlorooctane 129 133 70-135 % 105 11.03.2020 16:41 o-Terphenyl 123 70-135 %

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3141311
 Matrix:
 Solid
 Date Prep:
 11.03.2020

 MB Sample Id:
 7714461-1-BLK
 LCS Sample Id:
 7714461-1-BKS
 LCSD Sample Id:
 7714461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	11.03.2020 09:56
Toluene	< 0.00200	0.100	0.0955	96	0.101	101	70-130	6	35	mg/kg	11.03.2020 09:56
Ethylbenzene	< 0.00200	0.100	0.0976	98	0.102	102	71-129	4	35	mg/kg	11.03.2020 09:56
m,p-Xylenes	< 0.00400	0.200	0.197	99	0.205	103	70-135	4	35	mg/kg	11.03.2020 09:56
o-Xylene	< 0.00200	0.100	0.0967	97	0.102	102	71-133	5	35	mg/kg	11.03.2020 09:56

MBMB LCS LCS LCSD Limits Units Analysis LCSD **Surrogate** %Rec Flag %Rec Flag %Rec Flag Date 11.03.2020 09:56 1,4-Difluorobenzene 104 99 104 70-130 % 11.03.2020 09:56 4-Bromofluorobenzene 103 110 70-130 % 110

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3141311Matrix: SoilDate Prep:11.03.2020

Parent Sample Id: 676514-007 MS Sample Id: 676514-007 S MSD Sample Id: 676514-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	F
Benzene	< 0.00201	0.101	0.107	106	0.0886	89	70-130	19	35	mg/kg	11.03.2020 10:41	
Toluene	< 0.00201	0.101	0.0986	98	0.0879	88	70-130	11	35	mg/kg	11.03.2020 10:41	
Ethylbenzene	< 0.00201	0.101	0.0998	99	0.0910	91	71-129	9	35	mg/kg	11.03.2020 10:41	
m,p-Xylenes	< 0.00402	0.201	0.202	100	0.186	93	70-135	8	35	mg/kg	11.03.2020 10:41	
o-Xylene	< 0.00201	0.101	0.102	101	0.0943	94	71-133	8	35	mg/kg	11.03.2020 10:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		70-130	%	11.03.2020 10:41
4-Bromofluorobenzene	107		117		70-130	%	11.03.2020 10:41

E = MSD/LCSD Result

Ag SiO2 Na Sr Tl Sn U V Zn 1631 / 245.1 / 7470 / 7471 : by: (Signature) Date/Time	B Cd Ca Cr Co Cu Fe Pb Ad Cr Co Cu Pb Mn Mo Ni by the client if such losses are due to cin alyzed. These terms will be enforced unle Relinquished by: (Signatu	olient company to xence, its y losses or expenses incurred submitted to Xence, but not an Date/Time	e) [1]2	Received by: (Signature)	Signature)	Relinquished by: (Signature)
Ag SiO2 Na Sr Tl Sn U V Zn 1631 / 245.1 / 7470 / 7471 : by: (Signature) Date/Time	B Cd Ca Cr Co Cu Fe Pb Mg Cd Cr Co Cu Pb Mn Mo Ni Se saffilates and subcontractors. It assigns stand at by the client if such losses are due to circum nalyzed. These terms will be enforced unless p Relinquished by: (Signature)	Sb As Ba Be Sb As Ba Be Scompany to Xenco, its sor expenses incurre ted to Xenco, but not a Date/Time	e)	Received by: (Signatur	Signature)	Relinquished by: (
Ag SiO2 Na Sr Tl Sn U V Zn 1631/245.1/7470 /7471	B Cd Ca Cr Co Cu Fe Pb Mg Cd Cr Co Cu Pb Mn Mo Ni Se saffiliates and subcontractors. It assigns stand by the client if such losses are due to circum nalyzed. These terms will be enforced unless p	Sb As Ba Be company to Xenco, Its sor expenses incurre ted to Xenco, but not a	oacii campio cuciii			enco. A minimum charge
Ag SiO2	Mo N. Pb	Al Sb As Ba Be Sb As Ba Be	onsibility for any losse	amples constitutes a valid pure and shall not assume any response of \$5 fc	le only for the cost of samples of \$75.00 will be applied to each	ervice Xenco will be lish
			RCRA 13PPM Texas 11 / TCLP / SPLP 6010: 8RCRA	9zed TCLP / SPLP 60	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 Circle Method(s) a
		× ×	3.5-41	oni octodai	٠4, ٥	CH02@ 3.5
Sample Comments		TPH (E	Depth	Date Time Sampled Sampled	Matrix	Sample Identification
IAI stains the day received by the lab, if received by 4:30pm		(EPA 8	oer of	Total Containers:	S	Sample Custody Seals:
H>4		021E	-0-2 Con		8	Cooler Custody Seals:
	,	3)		tum oo	No. No.	Received Intact:
			res No	Les NO Met Ice.	Tellip Didlik.	מאווי בד ואדימבוי ו
			71		a byels	Sampler's Name. A
				7 7 6	Lifter	
			1	Rush:		-
			A	Routine	034820010	ň
Work Order Notes	ANALYSIS REQUEST		Turn Around	Tui	RDX 17-25	Project Name:
Deliverables: EDD		v.com & abyers(Email: jhernandez@ltenv.com & abyers@ltenv.com	Email:	281-702-2329	Phone: 2
Reporting:Level III ☐⊌vel III ☐\$T/UST T☐kP └☐el IV ☐		Carlsbad, NM 88220	City, State ZIP:		Midland, TX 79705	City, State ZIP: N
		5315 Buena Vista Dr	Address:		3300 North A Street	
Program: UST/PST ☐RP ☐rownfields F☐C ┫perfund [WPX Energy	Company Name:		LT Environmental, Inc.	Company Name: L
Work Order Com	5	Lynda Laumbach	Bill to: (if different)		Joseph Hernandez	Project Manager: J
-2000) www.xenco.com Page of of	Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)	480-355-0900) Atlar	-7550) Phoenix,AZ (Hobbs,NM (575-392		
	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	Dallas, TX (214) 902- EL Paso, TX (915)5	t,TX (281) 240-4200 d,TX (432-704-5440)	Houstor Midlan	ABORATORIES	LAB
Work Order No: VIG 1	Chain of Custody	olidili ol				

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 11.02.2020 03.50.00 PM Air and Metal samples Acceptable Range: Ambient

Work Order #: 676713

Analyst:

Air and Metal samples Acceptable Range: Ambier
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 contai	ner/ 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 relinquish	ned/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/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 headsp	ace?	N/A	

Checklist completed by:	Cloe Clifton	Date: 11.03.2020
Checklist reviewed by:	Jessica Vramer	Date: 11.03.2020

Jessica Kramer

PH Device/Lot#:

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

Page 165 of 190

Certificate of Analysis Summary 676715

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-25

Project Id:

034820010

Date Received in Lab: Mon 11.02.2020 15:50

Contact:

Joseph Hernandez

Report Date: 11.05.2020 08:37

NM **Project Location:**

Project Manager: Jessica Kramer

Lab Id:	676715-001					
Field Id:	CH02 @ 5.5-6'					
Depth:	5.5-6 ft					
Matrix:	SOIL					
Sampled:	10.29.2020 12:30					
Extracted:	11.03.2020 09:30					
Analyzed:	11.03.2020 20:06					
Units/RL:	mg/kg RL					
	< 0.00200 0.00200					
	<0.00200 0.00200					
	<0.00200 0.00200					
	< 0.00399 0.00399					
	<0.00200 0.00200					
	< 0.00200 0.00200					
	< 0.00200 0.00200					
Extracted:	11.03.2020 13:00					
Analyzed:	11.03.2020 16:16					
Units/RL:	mg/kg RL					
	148 49.9					
Extracted:	11.03.2020 13:27					
Analyzed:	11.03.2020 19:03					
Units/RL:	mg/kg RL					
	<50.2 50.2					
	99.0 50.2					
	<50.2 50.2					
	99.0 50.2					
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed: Units/RL: Extracted: Analyzed: Units/RL: Extracted: Analyzed: Analyzed:	Field Id: CH02 @ 5.5-6¹ Depth: 5.5-6 ft Matrix: SOIL Sampled: 10.29.2020 12:30 Extracted: 11.03.2020 09:30 Analyzed: 11.03.2020 20:06 Units/RL: mg/kg RL <0.00200 0.00200 0.00200 <0.00200 0.00200 0.00200 <0.00200 0.00200 0.00200 <0.00200 0.00200 0.00200 <0.00200 0.00200 0.00200 Extracted: 11.03.2020 13:00 11.03.2020 16:16 Units/RL: mg/kg RL Extracted: 11.03.2020 13:27 11.03.2020 13:27 Analyzed: 11.03.2020 19:03 mg/kg RL <50.2 50.2 50.2 <99.0 50.2 50.2 <50.2 50.2 50.2	Field Id: Depth: 5.5-6 ft Matrix: SOIL Sampled: 10.29.2020 12:30 Extracted: 11.03.2020 09:30 Analyzed: 11.03.2020 20:06 Units/RL: mg/kg RL <0.00200 0.00200 <0.00200 0.00200 <0.00200 0.00200 <0.00200 0.00200 <0.00200 0.00200 <0.00200 0.00200 <0.00200 0.00200 <0.00200 0.00200 Extracted: 11.03.2020 13:00 Analyzed: 11.03.2020 16:16 Units/RL: mg/kg RL 148 49.9 Extracted: 11.03.2020 13:27 Analyzed: 11.03.2020 13:27 Analyzed: 11.03.2020 19:03 Units/RL: mg/kg RL <50.2 50.2 99.0 50.2 <50.2 50.2	Field Id: CH02 @ 5.5-6' Depth: 5.5-6 ft Matrix: SOIL Sampled: 10.29.2020 12:30 Extracted: 11.03.2020 09:30 Analyzed: 11.03.2020 20:06 Units/RL: mg/kg RL <0.00200 0.00200 <0.00200 10.00200 <0.00200 11.03.2020 13:00 Extracted: 11.03.2020 16:16 Units/RL: mg/kg RL 148 49.9 Extracted: 11.03.2020 13:27 Analyzed: 11.03.2020 19:03 Units/RL: mg/kg RL <0.00200 0.00200 <0.00200 0.00200 <0.00200 0.00200 Extracted: 11.03.2020 13:27 Analyzed: 11.03.2020 19:03 Units/RL: mg/kg RL <0.00200 0.00200 <0.00200 0.00200 Extracted: 11.03.2020 19:03 Units/RL: mg/kg RL <0.00200 0.00200 <0.00200 0.00200 Extracted: 50.2 50.2 99.0 50.2 <0.00200 0.00200 Extracted: 50.2 50.2 <0.00200 0.00200	Field Id: CH02 @ 5.5-6' Depth: 5.5-6 ft SOIL Sampled: 10.29.2020 12:30 Extracted: 11.03.2020 09:30 Analyzed: Units/RL: mg/kg RL RL <0.00200 0.00200 0.00200 0.00200 <0.00200 0.00200 0.00200 0.00200 <0.00200 0.00200 0.00200 0.00200 Extracted: 11.03.2020 13:00 Analyzed: 11.03.2020 16:16 Units/RL: mg/kg RL RL Extracted: 11.03.2020 13:27 Analyzed: 11.03.2020 19:03 Units/RL: mg/kg RL RL <50.2 50.2 50.2 99.0 50.2	Field Id: CH02 @ 5.5-6' Depth: 5.5-6 ft SOIL Sampled: 10.29.2020 12:30 Extracted: 11.03.2020 99:30 Analyzed: 11.03.2020 20:06 Units/RL: mg/kg RL < 0.00200 0.00200

BRL - Below Reporting Limit

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

Jessica Weamer



Analytical Report 676715

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

RDX 17-25 034820010 11.05.2020

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 (T104704219-20-23) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



11.05.2020

Project Manager: Joseph Hernandez

LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): 676715

RDX 17-25

Project Address: NM

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) 676715. 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. 676715 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 676715

LT Environmental, Inc., Arvada, CO

RDX 17-25

 Sample Id
 Matrix
 Date Collected
 Sample Depth
 Lab Sample Id

 CH02 @ 5.5-6'
 S
 10.29.2020 12:30
 5.5 - 6 ft
 676715-001

Xenco

Environment Testing

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 17-25

Project ID: Report Date: 11.05.2020 034820010 Work Order Number(s): 676715 Date Received: 11.02.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Xenco

Certificate of Analytical Results 676715

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH02 @ 5.5-6' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676715-001

Seq Number: 3141306

Date Collected: 10.29.2020 12:30

Sample Depth: 5.5 - 6 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: Analyst: MAB

MAB

Date Prep:

11.03.2020 13:00

% Moisture:

Basis:

Wet Weight

Analysis Date Parameter Cas Number Result RL Units Flag Dil Chloride 16887-00-6 148 11.03.2020 16:16 5 49.9 mg/kg

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

CAC Analyst: Seq Number: 3141297 Date Prep: 11.03.2020 13:27 % Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.2	50.2		mg/kg	11.03.2020 19:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	99.0	50.2		mg/kg	11.03.2020 19:03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	11.03.2020 19:03	U	1
Total TPH	PHC635	99.0	50.2		mg/kg	11.03.2020 19:03		1
Surrogate	(Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	127	%	70-135	11.03.2020 19:03
o-Terphenyl	84-15-1	132	%	70-135	11.03.2020 19:03

Wet Weight

11.03.2020 20:06

70-130

Certificate of Analytical Results 676715

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH02 @ 5.5-6' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676715-001 Date Collected: 10.29.2020 12:30 Sample Depth: 5.5 - 6 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

460-00-4

Seq Number: 3141311

4-Bromofluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	11.03.2020 20:06	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	11.03.2020 20:06	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	11.03.2020 20:06	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	11.03.2020 20:06	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	11.03.2020 20:06	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	11.03.2020 20:06	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	11.03.2020 20:06	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	5	540-36-3	76	%	70-130	11.03.2020 20:06		

98



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

E300P

E300P

E300P

Flag

Prep Method:

QC Summary 676715

LT Environmental, Inc.

RDX 17-25

Analytical Method: Inorganic Anions by EPA 300 Prep Method: Seq Number: 3141306 Matrix: Solid Date Prep:

11.03.2020 LCS Sample Id: 7714455-1-BKS LCSD Sample Id: 7714455-1-BSD MB Sample Id: 7714455-1-BLK

LCS RPD MB Spike LCS Limits %RPD Units Analysis LCSD LCSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date Chloride <10.0 250 260 104 259 90-110 0 20 11.03.2020 15:10 104 mg/kg

Analytical Method: Inorganic Anions by EPA 300

Prep Method: Seq Number: 3141306 Matrix: Soil Date Prep: 11.03.2020 676707-001 S 676707-001 MS Sample Id: MSD Sample Id: 676707-001 SD Parent Sample Id:

Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis **Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result 11.03.2020 15:26 Chloride 606 200 796 95 806 100 90-110 1 20 mg/kg

Analytical Method: Inorganic Anions by EPA 300

3141306 Seq Number: Matrix: Soil Date Prep: 11.03.2020 MS Sample Id: 676720-001 S MSD Sample Id: 676720-001 SD Parent Sample Id: 676720-001

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limite Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 107 20 11.03.2020 16:43 148 200 361 363 108 90-110 1 mg/kg

Analytical Method: TPH by SW8015 Mod

SW8015P Prep Method: 3141297 Matrix: Solid Seq Number: Date Prep: 11.03.2020 7714426-1-BLK LCS Sample Id: 7714426-1-BKS LCSD Sample Id: 7714426-1-BSD MB Sample Id:

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis **Parameter** Result Limit Date Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 11.03.2020 15:40 35 < 50.0 1000 1180 118 1130 113 70-135 4 mg/kg 11.03.2020 15:40 Diesel Range Organics (DRO) 70-135 4 35 < 50.0 1000 1250 125 1200 120 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 11.03.2020 15:40 1-Chlorooctane 122 130 126 70-135 % 11.03.2020 15:40 o-Terphenyl 117 120 118 70-135 %

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method:

Seq Number: 3141297 Matrix: Solid Date Prep: 11.03.2020

MB Sample Id: 7714426-1-BLK

MBUnits Analysis Flag **Parameter** Result Date 11.03.2020 15:20 Motor Oil Range Hydrocarbons (MRO) < 50.0 mg/kg

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

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result

= MSD/LCSD Result

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

Flag

Flag

QC Summary 676715

LT Environmental, Inc.

RDX 17-25

 Analytical Method:
 TPH by SW8015 Mod
 Prep Method:
 SW8015P

 Seq Number:
 3141297
 Matrix:
 Soil
 Date Prep:
 11.03.2020

 Parent Sample Id:
 676707-001
 MS Sample Id:
 676707-001 SD
 MSD Sample Id:
 676707-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Gasoline Range Hydrocarbons (GRO)	< 50.3	1010	1130	112	1050	105	70-135	7	35	mg/kg	11.03.2020 16:41
Diesel Range Organics (DRO)	< 50.3	1010	1150	114	1140	114	70-135	1	35	mg/kg	11.03.2020 16:41

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		133		70-135	%	11.03.2020 16:41
o-Terphenyl	123		105		70-135	%	11.03.2020 16:41

Analytical Method:BTEX by EPA 8021BPrep Method:SW5035ASeq Number:3141311Matrix:SolidDate Prep:11.03.2020MB Sample Id:7714461-1-BLKLCS Sample Id:7714461-1-BKSLCSD Sample Id:7714461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	11.03.2020 09:56
Toluene	< 0.00200	0.100	0.0955	96	0.101	101	70-130	6	35	mg/kg	11.03.2020 09:56
Ethylbenzene	< 0.00200	0.100	0.0976	98	0.102	102	71-129	4	35	mg/kg	11.03.2020 09:56
m,p-Xylenes	< 0.00400	0.200	0.197	99	0.205	103	70-135	4	35	mg/kg	11.03.2020 09:56
o-Xylene	< 0.00200	0.100	0.0967	97	0.102	102	71-133	5	35	mg/kg	11.03.2020 09:56

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		99		104		70-130	%	11.03.2020 09:56
4-Bromofluorobenzene	110		103		110		70-130	%	11.03.2020 09:56

 Analytical Method:
 BTEX by EPA 8021B
 Prep Method:
 SW 5035A

 Seq Number:
 3141311
 Matrix:
 Soil
 Date Prep:
 11.03.2020

 Parent Sample Id:
 676514-007
 MS Sample Id:
 676514-007 S
 MSD Sample Id:
 676514-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00201	0.101	0.107	106	0.0886	89	70-130	19	35	mg/kg	11.03.2020 10:41	
Toluene	< 0.00201	0.101	0.0986	98	0.0879	88	70-130	11	35	mg/kg	11.03.2020 10:41	
Ethylbenzene	< 0.00201	0.101	0.0998	99	0.0910	91	71-129	9	35	mg/kg	11.03.2020 10:41	
m,p-Xylenes	< 0.00402	0.201	0.202	100	0.186	93	70-135	8	35	mg/kg	11.03.2020 10:41	
o-Xylene	< 0.00201	0.101	0.102	101	0.0943	94	71-133	8	35	mg/kg	11.03.2020 10:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		70-130	%	11.03.2020 10:41
4-Bromofluorobenzene	107		117		70-130	%	11.03.2020 10:41

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 Dupli

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result

 $\begin{array}{ll} C &= MS/LCS \; Result \\ E &= MSD/LCSD \; Result \end{array}$

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

				Chain of Custody	Custody		Work Order No:	676715
LABO	BORATORIES	Midla	on, TX (281) 240-4200 ind, TX (432-704-5440	Dallas,TX (214) 902-c DEL Paso,TX (915)58:	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	-3334 296		
		Hobbs,NM (575-39	32-7550) Phoenix,AZ	(480-355-0900) Atlant	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	L (813-620-2000)	www.xenco.com	Page of
	Joseph Hernandez		Bill to: (if different)	Lynda Laumbach			ğΠ	
y Name:	LT Environmental, Inc.		Company Name:	WPX Energy		Program: UST/PST	- I	R C S perfund
Address: 330	3300 North A Street		Address:	5315 Buena Vista Dr	ı Dr	State of	[- Contains
City, State ZIP: Mic	Midland, TX 79705		City, State ZIP:	Carlsbad, NM 88220	99n	Reporting:Level II	Byel III TRIJIST	
Phone: 281	281-702-2329	Email:	jhernandez@lte	ihernandez@ltenv.com & abvers@ltenv.com	ltenv.com	Deliverables: EDD	ADaPT C	
Project Name: RD	RDX 17-25	1.	Turn Around		ANALYS			- 11
эг:	034820010	Routine	ne 🔯		- ANAL OIS K	TO KEWOES!		WOLK Order Notes
P.O. Number: Liner	er	Rush:	٦					
Sampler's Name: Ann	Anna Byers	Due Date:	Date:					
유	Temp Blank	(Voc) No West low	Ш					
Temperature (°C):	2	Thermometer ID	140					
Received Intact:	Meg. No	+100000		od) 3)				
Cooler Custody Seals:	Yes (MO N/A	Correction Factor:	Con	15 M				
Sample Custody Seals:	Yes (No) N/A	Total Containers:	er of	PA 80			TAT	TAT starts the day recevied by the lab, if received by 4:30pm
Sample Identification	7	Sampled Sampled	Depth	TPH (E BTEX Chloric				Sample Comments
CH\$2 @ 5.5	5-6. 8	10/20/20 123¢	5.5-61	× ×				
			<u> </u>					
				1				
					<i>\range</i>			
Circle Method(s) and Metal(s) to be analyzed	200.8 / 6020: d Metal(s) to be anal	9RCRA 13PPM Vzed TCLP / SPLP 60	RCRA 13PPM Texas 11 / TCLP / SPLP 6010: 8RCRA	Al Sb As Ba Be Sb As Ba Be C	a Be B Cd Ca Cr Co Cu Fe Pb Mg Mr Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag	Pb Mg Mn Mo Ni Se Ag TI U	Ni K Se Ag SiO2	Na Sr Tl Sn ∪ V Zn 1631/245.1/7470 /7471: Hg
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses a of Xenco. A minimum charge of \$7.6.00 will be applied to each project and a charge of \$6 for each sample submitted to Xenco, but not analyzed. These terms will be e	ant and relinquishment of samples of samples \$75.00 will be applied to ear	amples constitutes a valid puro and shall not assume any resp ch project and a charge of \$5 fc	hase order from client	company to Xenco, its at as or expenses incurred b ted to Xenco, but not ana		It assigns standard terms and conditions to due to circumstances beyond the contro		
Relinquished by: (Signature)	nature)	Denoised by: /Cianature	or each sample submit	Date/Time	Relinquished by: (Sign	(Signature)	Received by: (Signature)	Date/Time
Car By	1	received by (Signature)	e) submit					1
0		received by: (oily later)	e) Dat	(5:50				

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

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

Date/ Time Received: 11.02.2020 03.50.00 PM

Temperature Measuring device used: T_NM_007

Work Order #: 676715	remperature meas	uning device used . I
	Sample Receipt Checklist	Comments
#1 *Temperature of cooler(e)?		1

#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	

Checklist completed by:

Cloe Clifton

Checklist reviewed by:

Jessica Warner

Date: 11.03.2020

Date: 11.03.2020

PH Device/Lot#:

Analyst:

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

Certificate of Analysis Summary 676719

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-25

Project Id:

034820010

NM

Contact: Project Location:

Joseph Hernandez

Date Received in Lab: Mon 11.02.2020 15:50 **Report Date:** 11.05.2020 08:10

Project Manager: Jessica Kramer

	Lab Id:	676719-001			
Analysis Requested	Field Id:	CH02 @ 8-8.5'			
muysis Requesicu	Depth:	8-8.5 ft			
	Matrix:	SOIL			
	Sampled:	10.29.2020 13:15			
BTEX by EPA 8021B	Extracted:	11.03.2020 09:30			
	Analyzed:	11.03.2020 21:14			
	Units/RL:	mg/kg RL			
Benzene		< 0.00202 0.00202			
Toluene		< 0.00202 0.00202			
Ethylbenzene		< 0.00202 0.00202			
m,p-Xylenes		< 0.00403 0.00403			
o-Xylene		< 0.00202 0.00202			
Total Xylenes		< 0.00202 0.00202			
Total BTEX		<0.00202 0.00202			
Inorganic Anions by EPA 300	Extracted:	11.03.2020 13:00			
	Analyzed:	11.03.2020 16:32			
	Units/RL:	mg/kg RL			
Chloride		157 10.0			
TPH by SW8015 Mod	Extracted:	11.03.2020 13:27			
	Analyzed:	11.03.2020 20:04			
	Units/RL:	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8			
Diesel Range Organics (DRO)		<49.8 49.8	_		_
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8			
Total TPH		<49.8 49.8			
		<u> </u>		 	

BRL - Below Reporting Limit

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

Jessica Weamer



Analytical Report 676719

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

RDX 17-25 034820010 11.05.2020

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 (T104704219-20-23) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



11.05.2020

Project Manager: Joseph Hernandez

I. T. Frysironmontol, Inc.

LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): 676719

RDX 17-25

Project Address: NM

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) 676719. 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. 676719 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 676719

LT Environmental, Inc., Arvada, CO

RDX 17-25

 Sample Id
 Matrix
 Date Collected
 Sample Depth
 Lab Sample Id

 CH02 @ 8-8.5'
 S
 10.29.2020 13:15
 8 - 8.5 ft
 676719-001

Xenco

Environment Testing

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 17-25

Project ID: Report Date: 11.05.2020 034820010 Work Order Number(s): 676719 Date Received: 11.02.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 676719

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH02 @ 8-8.5' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676719-001

Date Collected: 10.29.2020 13:15

Sample Depth: 8 - 8.5 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst:

Seq Number: 3141306

Date Prep:

11.03.2020 13:00

11.03.2020 13:27

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	157	10.0	mg/kg	11.03.2020 16:32		1

Analytical Method: TPH by SW8015 Mod

Tech: MAB Analyst:

Seq Number: 3141297

CAC

Date Prep:

% Moisture:

Prep Method: SW8015P

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	11.03.2020 20:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	11.03.2020 20:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	11.03.2020 20:04	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	11.03.2020 20:04	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	135	%	70-135	11.03.2020 20:04
o-Terphenyl	84-15-1	124	%	70-135	11.03.2020 20:04

Wet Weight

Certificate of Analytical Results 676719

LT Environmental, Inc., Arvada, CO

RDX 17-25

Sample Id: CH02 @ 8-8.5' Matrix: Soil Date Received:11.02.2020 15:50

Lab Sample Id: 676719-001 Date Collected: 10.29.2020 13:15 Sample Depth: 8 - 8.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Seq Number: 3141311

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	11.03.2020 21:14	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	11.03.2020 21:14	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	11.03.2020 21:14	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	11.03.2020 21:14	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	11.03.2020 21:14	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	11.03.2020 21:14	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	11.03.2020 21:14	U	1
Surrogate	Ca	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.03.2020 21:14	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.03.2020 21:14	



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.

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

^{**} Surrogate recovered outside laboratory control limit.

QC Summary 676719

LT Environmental, Inc.

RDX 17-25

259

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3141306

Matrix: Solid

104

Prep Method: Date Prep:

RPD

Limit

20

E300P 11.03.2020

MB Sample Id:

7714455-1-BLK

LCS Sample Id: 7714455-1-BKS LCSD Sample Id: 7714455-1-BSD

Parameter

Chloride

MB Spike Result Amount <10.0

250

200

LCS LCS Result %Rec

260

LCSD LCSD Result %Rec

104

MSD

Limits %RPD

0

%RPD

Units

mg/kg

Analysis Flag Date 11.03.2020 15:10

Analytical Method: Inorganic Anions by EPA 300

Seq Number:

3141306

Matrix: Soil

95

Prep Method: Date Prep:

RPD

Prep Method:

E300P 11.03.2020

Parent Sample Id:

676707-001

676707-001 S MS Sample Id:

MSD Sample Id: 676707-001 SD

> Units Flag

Parameter

Parent Spike Result Amount

606

MS MS Result %Rec

MSD Result

%Rec 100 90-110

Limits

90-110

Limit 1 20

Analysis Date 11.03.2020 15:26

Chloride

796

806

mg/kg

Analytical Method: Inorganic Anions by EPA 300 Seq Number:

3141306

Matrix: Soil

Date Prep:

E300P

11.03.2020

Parent Sample Id: **Parameter**

676720-001

Spike **Parent** Result

MS Sample Id: MS MS Result %Rec

676720-001 S MSD

MSD Limite %Rec

RPD %RPD

MSD Sample Id: 676720-001 SD Units

Analysis Flag

Chloride

Amount 148 200

107 361

Result 363

108 90-110

Limit 20 1

11.03.2020 16:43 mg/kg

Date

Analytical Method: TPH by SW8015 Mod

Seq Number:

3141297

Spike

Flag

Matrix: Solid

Prep Method: Date Prep:

SW8015P 11.03.2020

MB Sample Id:

7714426-1-BLK

LCS Sample Id: 7714426-1-BKS LCSD Sample Id: 7714426-1-BSD

Parameter

Gasoline Range Hydrocarbons (GRO)

Result Amount < 50.0 1000 1000

MB

LCS LCS Result %Rec

LCSD

LCSD Limits %Rec

%RPD **RPD**

Units

Analysis

Diesel Range Organics (DRO)

< 50.0

1180 1250

Result 118 1130 1200

113 70-135

LCSD

%Rec

126

118

Limit 35 4

35

Limits

70-135

70-135

Date 11.03.2020 15:40

1-Chlorooctane

o-Terphenyl

Surrogate

Motor Oil Range Hydrocarbons (MRO)

MB%Rec 122

117

MB

125 LCS LCS

%Rec

130

120

70-135 120

4

LCSD

Flag

mg/kg mg/kg

%

%

11.03.2020 15:40

Units Analysis Date

11.03.2020 15:40

11.03.2020 15:40

3141297

Analytical Method: TPH by SW8015 Mod

Matrix: Solid

Flag

Prep Method:

Date Prep:

SW8015P

11.03.2020

Flag

Parameter

Seq Number:

MBResult < 50.0

MB Sample Id: 7714426-1-BLK

Units

mg/kg

Analysis

Date 11.03.2020 15:20 Flag

MS/MSD Percent Recovery Relative Percent Difference

LCS/LCSD Recovery

Log Difference

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

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result

= MSD/LCSD Result

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

Flag

Flag

QC Summary 676719

LT Environmental, Inc.

RDX 17-25

Analytical Method:TPH by SW8015 ModPrep Method:SW8015PSeq Number:3141297Matrix: SoilDate Prep:11.03.2020

Parent Sample Id: 676707-001 MS Sample Id: 676707-001 S MSD Sample Id: 676707-001 SD

RPD **Parent** Spike MS MS Limits %RPD Units Analysis MSD **MSD Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) < 50.3 1010 1050 35 11.03.2020 16:41 1130 112 105 70-135 7 mg/kg 11.03.2020 16:41 1010 70-135 Diesel Range Organics (DRO) < 50.3 1150 114 1140 1 35 mg/kg 114

Analysis MS MS **MSD** Limits Units MSD **Surrogate** %Rec Flag Flag Date %Rec 11.03.2020 16:41 1-Chlorooctane 129 133 70-135 % 11.03.2020 16:41 o-Terphenyl 123 105 70-135 %

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3141311
 Matrix:
 Solid
 Date Prep:
 11.03.2020

 MB Sample Id:
 7714461-1-BLK
 LCS Sample Id:
 7714461-1-BKS
 LCSD Sample Id:
 7714461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	11.03.2020 09:56
Toluene	< 0.00200	0.100	0.0955	96	0.101	101	70-130	6	35	mg/kg	11.03.2020 09:56
Ethylbenzene	< 0.00200	0.100	0.0976	98	0.102	102	71-129	4	35	mg/kg	11.03.2020 09:56
m,p-Xylenes	< 0.00400	0.200	0.197	99	0.205	103	70-135	4	35	mg/kg	11.03.2020 09:56
o-Xylene	< 0.00200	0.100	0.0967	97	0.102	102	71-133	5	35	mg/kg	11.03.2020 09:56

MB MB LCS LCS LCSD Limits Units Analysis LCSD **Surrogate** %Rec Flag %Rec Flag %Rec Flag Date 11.03.2020 09:56 1,4-Difluorobenzene 104 99 104 70-130 % 11.03.2020 09:56 103 70-130 % 4-Bromofluorobenzene 110 110

 Analytical Method:
 BTEX by EPA 8021B
 Prep Method:
 SW 5035A

 Seq Number:
 3141311
 Matrix:
 Soil
 Date Prep:
 11.03.2020

 Parent Sample Id:
 676514-007
 MS Sample Id:
 676514-007 S
 MSD Sample Id:
 676514-007 SD

RPD **Parent** Spike MS MS MSD MSD Limits %RPD Units Analysis Flag **Parameter** Limit Date Result Amount Result %Rec %Rec Result 11.03.2020 10:41 < 0.00201 0.101 0.107 106 0.0886 70-130 19 35 Benzene 89 mg/kg 11.03.2020 10:41 70-130 35 Toluene < 0.00201 0.101 0.0986 98 0.0879 88 11 mg/kg Ethylbenzene < 0.00201 0.101 0.0998 99 0.0910 91 71-129 9 35 11.03.2020 10:41 mg/kg 0.201 0.202 100 8 35 11.03.2020 10:41 m,p-Xylenes < 0.00402 0.186 93 70-135 mg/kg < 0.00201 0.101 0.102 101 0.0943 94 71-133 8 35 mg/kg 11.03.2020 10:41 o-Xylene

MS MS **MSD MSD** Limits Units Analysis Surrogate Flag Date Flag %Rec %Rec 11.03.2020 10:41 1,4-Difluorobenzene 100 101 70-130 % 11.03.2020 10:41 4-Bromofluorobenzene 107 117 70-130 %

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference
$$\begin{split} [D] &= 100*(C\text{-A}) \, / \, B \\ RPD &= 200* \mid (C\text{-E}) \, / \, (C\text{+E}) \mid \\ [D] &= 100*(C) \, / \, [B] \end{split}$$

 $Log\ Diff. = Log(Sample\ Duplicate) - Log(Original\ Sample)$

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

Ag SiO2		4				9	1		
Ag SiO2			0				-		
Ag SiO2		2	05:5	02/4/1		C		Jan Jan	but
Ag SiO2		Relinquished by: (Signature)	Date/Time	D	Received by: (Signature)	Received by	ature)	by: (Sign	Relinquished by: (Signature)
	reassigns surfusive terms and continuous edue to circumstances beyond the control forced unless previously negotiated.		or expenses incurred to Xenco, but not ana	ny losses or	of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses and shall not assume any responsibility for any losses or expenses incurred by the client if such losses and shall not assume any responsibility for any losses or expenses incurred by the client if such losses and sample submitted to Xenco, but not analyzed. These terms will be entirely such as the sample submitted to Xenco, but not analyzed. These terms will be entirely such as the sample submitted to Xenco, but not analyzed. These terms will be entirely such as the sample submitted to Xenco, but not analyzed.	es and shall not as	ly for the cost of sample 75.00 will be applied to e	II be liable onl	of Xenco. A minimur
	Pb Mg Mn Mo Ni K Se Ni Se Ag Tl U	Mo Mo	Al Sb As Ba Be B Cd Ca Sb As Ba Be Cd Cr Co	CRA St	8RCRA 13PPM Texas 11 TCLP / SPLP 6010: 8RCRA	alyzed T(Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	/ 6010 od(s) and	Circle Method(s) a
			C						
		0	5						
			×	-	1315 8-8.5'	10/20/2017	8.5'	8-8	C4020
Sample Comments			TPH (E BTEX (Numb	Time Sampled Depth	Date Sampled S	2	Sample Identification	Sample
lah, if received by 4:30pm			EPA 8			Total C	8	Seals:	Sample Custody Seals:
H-1			0211		Correction Factor: 2	Correcti	9/	Seals:	Cooler Custody Seals:
			B)		NMOON	1	Mes No	,	Received Intact:
				ers	ermometer ID	(12/10	?	Temperature (°C)
					Wet Ice: (Yes) No	Yes No	Ţemp Blank:	CEIPT	SAMPLE RECEIPT
					Due Date:		Anna Byers		Sampler's Name:
					Rush:			Liner	P.O. Number:
					Routine 🕏		20010	034820010	Project Number:
Work Order Notes	EST	ANALYSIS REQUEST			Turn Around		17-25	RDX 17-25	Project Name:
ADaPT Other:	Deliverables: EDD	tenv.com	om & abyers@lt	@ltenv.co	Email: jhernandez@ltenv.com & abyers@ltenv.com		281-702-2329	281-7	Phone:
□ bvelili □ bī/ust ī □ kP □ leiv □	Reporting:Level III	20	Carlsbad, NM 88220		City, State ZIP:		Midland, TX 79705	Midla	City, State ZIP:
	State of Project:	Dr	5315 Buena Vista Dr	Şī	Address:		3300 North A Street	3300	Address:
	Program: UST/PST		WPX Energy		Company Name:		LT Environmental, Inc.		Company Name:
Work Order Comments			Lynda Laumbach		Bill to: (if different)		Joseph Hernandez		Project Manager:
www.xenco.com Page of of	pa,FL (813-620-2000)	,GA (770-449-8800) Tampa,FL (813	355-0900) Atlanta,	nix,AZ (480	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tam	Hobbs,			
		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	.Paso,TX (915)585-	1-5440) EL	Houston, TX (281) 240 Midland, TX (432-704		ABORATORIES		-
WORK Order No:	5		Ollaill of oderody	9					

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 11.02.2020 03.50.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 676719

Analyst:

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 contain	ner/ 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 relinquish	ned/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/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 headsp	ace?	N/A	

* Must be	completed for	after-hours	delivery of	samples	prior to	placing in	the r	efrigerato	16

Checklist completed by:

Cloe Clifton

Checklist reviewed by:

Date: 11.03.2020

Date: 11.03.2020

Date: 11.03.2020

PH Device/Lot#:

OCD: 6/2/2021 12:00:24 AM Page 189 of 190

Incident ID	NAB1712952339
District RP	2RP-4198
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 con	firmed as part of any request for deferral of remediation.						
Contamination must be in areas immediately under or around predeconstruction.	oduction equipment where remediation could cause a major facility						
Extents of contamination must be fully delineated.							
Contamination does not cause an imminent risk to human health, the environment, or groundwater.							
rules and regulations all operators are required to report and/or file c which may endanger public health or the environment. The acceptar liability should their operations have failed to adequately investigate	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: Lynda Laumbach	Title: Environmental Specialist						
Printed Name: Lynda Laumbach Signature:	Date:06/01/2021						
email: lynda.laumbach@wpxenergy.com	Telephone: 575-725-1647						
OCD Only							
Received by: Robert Hamlet	Date: 9/1/2021						
☐ Approved	Approval Denied Deferral Approved						
Signature: Robert Hamlet	Date: 9/1/2021						

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

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 30095

CONDITIONS

Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	30095
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created	Condition	Condition
Ву		Date
rhamlet	The Workplan/Remediation Plan is approved with the following conditions: Please make sure the edges/sidewalls and floor closure samples are delineated/excavated to meet closure criteria	9/1/2021
	standards for proven depth to water determination. Please make sure all groundwater data is included in closure report summary. If on-site lined treatment cell is conducted, a closure report	1
	must be loaded to the payment portal 90 days after the remediation plan has been approved. A five-point composite sample will need to be collected for every 50 cubic yards of treated soil. If	1
	contaminated soil can't be remediated to closure criteria levels in OCD time guidelines, the contaminated soil will need to be excavated and disposed of at an OCD approved facility.	