

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

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

NM OIL CONSERVATION

ARTESIA DISTRICT

JAN 02 2017 AB

Form C-141
Revised August 8, 2011

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

RECEIVED

Release Notification and Corrective Action

11AB1700454394 **OPERATOR** ☒ Initial Report ☐ Final Report

Name of Company	WPX Energy Inc/RKI 240289	Contact	Karolina Blaney
Address	5315 Buena Vista Dr.	Telephone No.	970 589 0743
Facility Name:	Pinnacle 36-32H	Facility Type:	Well Pad

Surface Owner: State	Mineral Owner: State	API No. 30-015-41587
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	36	22S	28E	150	FNL	1700	FWL	Eddy

Latitude: 32.355955527N Longitude: -104.043666686W

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 8 Bbls	Volume Recovered: 0 Bbls
Source of Release Flare Stack	Date and Hour of Occurrence 12/21/2016	Date and Hour of Discovery 12/21/2016 - 10:00 hrs MT
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? NMOCD Heather Patterson, Crystal Weaver & Michael Bratcher, SLO Amber Groves	
By Whom? Karolina Blaney	Date and Hour: 12/21/16-15:00 hrs MT	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* The spill was caused by equipment failure; dumps on the heater treater were not working properly which resulted in oil spraying out of the flare stack.		
Describe Area Affected and Cleanup Action Taken.* The spill migrated off location for approximately 40-50 yards southwest of the well pad. After receiving SLO's approval, the impacted soil off location was scraped off. The impacted area will be sampled for chlorides, BTEX and TPH in accordance with NM OCD Guidelines for Remediation of Leaks, Spills, and Releases. Further remediation will be based on the analytical results.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		

Signature: <i>Karolina Blaney</i>	OIL CONSERVATION DIVISION	
Printed Name: Karolina Blaney	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Environmental Specialist	Approval Date: 11/4/17	Expiration Date: N/A
E-mail Address: Karolina.blaney@wpxenergy.com	Conditions of Approval: <i>See attached</i>	Attached <input checked="" type="checkbox"/>
Date: 1/2/2017 Phone: 970-589-0743		

* Attach Additional Sheets If Necessary

JRP-405B

Incident ID	NAB1700454394
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?	<u>>51</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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


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

State of New Mexico
Oil Conservation Division

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Incident ID	NAB1700454394
District RP	
Facility ID	
Application ID	

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

Printed Name: Jim Raley Title: Environmental Professional
Signature:  Date: 9/22/2021
email: jim.raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1700454394
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Jim RaleyTitle: Environmental ProfessionalSignature: Date: 9/22/2021email: jim.raley@dvn.comTelephone: 575-689-7597**OCD Only**

Received by: _____ Date: _____

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral ApprovedSignature: Date: 10/6/2022**Conditions of Approval:**

1. Based on the laboratory data, chloride results for SS04 at 6" (0.5 ft) is 5,510 mg/kg not 148 mg/kg. Additional horizontal delineation will need to be performed south of SS04 in addition to the proposed sample locations illustrated on Figure 2.



WSP USA

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

June 8, 2021

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

**RE: Remediation Work Plan
Pinnacle 36-32H
Incident Number nAB1700454394 (2RP-4058)
WPX Energy Permian, LLC.
Eddy County, New Mexico**

To Whom it May Concern:

WSP USA (WSP), on behalf of WPX Energy Permian, LLC. (WPX), is pleased to present the following Remediation Work Plan detailing site assessment and soil sampling activities at the Pinnacle 36-32H (Site) located in Unit C, Section 36 Township 22 South, Range 28 East, Eddy County, New Mexico (Figure 1). The purpose of the remediation and soil sampling activities was to address impacts to soil resulting from a release of crude oil at the Site by safely excavating impacted soil to the extent possible based on Site conditions. Additional soil sampling activities are being proposed to confirm the presence or absence of remaining impacts to soil associated with the subject release. Based on field observations, field screening activities, and laboratory analytical results from soil sampling activities, WPX is submitting this Remediation Work Plan describing remediation that has occurred and a proposal for additional delineation activities.

RELEASE BACKGROUND

On December 21, 2016, failure of the dumps on the heater treater caused the release of approximately 8 barrels (bbls) of oil to spray out of the flare stack and into the adjacent pasture pipeline Right-of-Way (ROW). 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 January 2, 2017 and was subsequently assigned Incident Number nAB1700454394 and Remediation Permit (RP) Number 2RP-4058. An initial photo of the release is provided in Attachment 1. The release area was immediately excavated to the extent possible following land access approval from the New Mexico State Land Office (SLO).

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, from Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). There are no regional or Site-specific hydrological conditions, such as shallow



surface water, karst features, wetlands, or vegetation that suggest the Site is conducive to shallow groundwater. Depth to groundwater at the Site is estimated to be greater than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted water well with depth to water data is New Mexico Office of the State Engineer (NMOSE) file number C-04417, located approximately 0.72 miles south of the Site. NMOSE well C-04417 was drilled by WPX on March 31, 2020 during a depth to water study of the area. Using a truck mounted drill rig equipped with hollow stem augers, the soil boring was advanced to a total depth of approximately 55 feet bgs. Groundwater was not observed within the soil boring after 48 hours and the boring was plugged and abandoned on April 3, 2021. This boring was installed at a topographically lower elevation and between the Site and the Pecos River, indicating groundwater beneath the Site is likely deeper than the boring location. The NMOSE Well Record and Log of the referenced well is included as Attachment 2.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 710 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Potential Site receptors are identified on Figure 1.

GEOLOGIC BACKGROUND

The local surface geology is recognized as the Gatuna Formation, which is known to be “capped by gravel-bearing calcrete, [range from] 0.5 [to] 1.0 [meter] thick” (NMT Publications)¹. This calcrete cap, also called an indurated caliche layer, has been observed and documented in the in the vicinity of the Site by work conducted through the New Mexico Geological Society. Consistently throughout the Site and its surrounding, the Gatuna Formation is well associated with “carbonate concretion” and “concretionary zones”, which often correlates with the named Mescalero caliche (Powers and Holt 1993)². The Mescalero caliche caps the Gatuna Formation “almost everywhere the Gatuna [Formation] is exposed (USGS)³,” and is well known as a well-cemented calcareous deposit in the Permian Basin.

¹ https://geoinfo.nmt.edu/publications/maps/geologic/ofgm/downloads/77/OFGM-77_Loving.pdf

² Dennis W. Powers and Robert M. Holt, 1993, pp. 271-282 in: Carlsbad Region (New Mexico and West Texas), Love, D. W.; Hawley, J. W.; Kues, B. S.; Austin, G. S.; Lucas, S. G.; [eds.], New Mexico Geological Society 44th Annual Fall Field Conference Guidebook, 357 p.

³ https://ngmdb.usgs.gov/Geolex/UnitRefs/MescaleroRefs_9278.html



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: 10,000 mg/kg

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

INITIAL REMEDIATION AND SOIL SAMPLING ACTIVITIES

On January 18, 2017, WPX personnel visited the Site to evaluate the extent of the release shortly following the release event and conducted initial scraping activities within the affected pasture area directed by surface staining. The release extent was mapped using a handheld Global Positioning System (GPS) unit, which is depicted on Figure 2. One soil sample (Pinnacle 36-32) was collected from the initial excavation. The location of the soil sample is depicted on Figure 2. The soil sample was submitted to ALS Environmental (ALS) located in Holland, Michigan for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8260B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following (NEMI) Method A4500-CL E-97. Based on laboratory analytical results for soil sample Pinnacle 36-32, delineation activities appeared warranted.

DELINEATION SOIL SAMPLING ACTIVITIES

On September 28, 2018, WSP personnel inspected the Site to further evaluate the release area and conduct delineation activities. A total of five soil samples (SS01 through SS05) were attempted utilizing a hand auger within the release area to assess for the presence or absence of impacted soil. During delineation activities, refusal was encountered at a competent, dense caliche stratum at the ground surface to approximately 0.5-foot bgs. Soil sample SS02 was collected as close to the original location of soil sample Pinnacle 36-32. The locations of soil samples are depicted on Figure 2. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Midland, Texas, for analysis of



BTEX following EPA Method 8021B; TPH- GRO, TPH-DRO, and TPH-ORO following EPA Method 8015M/D; and chloride following EPA Method 300.0. Photographic documentation of the Site assessment is provided in Attachment 1.

Between October 5 and 11, 2018, WSP personnel visited the Site for further delineation of the release extent utilizing heavy mechanical equipment and hammer drill attachment. Close inspection of the rock deemed it as an impermeable surface with a mature cement that was not only impenetrable with heavy equipment, but generally appeared impermeable to liquids. At that point a decontaminated hammer drill and excavator bucket were used to sample the rock, ensuring that samples collected were representative of the rock itself and not the overlying loose soil. The indurated caliche stratum was present from the ground surface to approximately 4 feet bgs. WSP collected at least two soil samples per sampling location: at the highest observed field screening depth and terminus of each soil sample location. Soil samples were collected, handled, and analyzed as previously described. Field screening results and observations for each soil sample were recorded on lithologic/soil sampling logs which are included in Attachment 3. The soil sample locations were mapped utilizing a GPS unit and are depicted on Figure 2.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results indicated that identified TPH within the pasture release footprint at ground surface only (SS01 and Pinnacle 36-32/SS02) and exceeds the reclamation standard for TPH. Laboratory analytical results indicated that chloride within the pasture release footprint ranged from ground surface to 2 feet bgs only (SS01, SS02 and SS03) and exceeds the reclamation standard for chloride. The TPH and chloride concentrations are delineated vertically within the subject release area.

Laboratory analytical results indicated TPH and chloride concentrations were compliant with the reclamation standard in soil sample SS04 and confirms vertical and lateral delineation to the south of the release. Laboratory analytical results indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in soil sample SS05. The laboratory analytical results are summarized on the attached Table 1 and complete laboratory analytical reports are included in Attachment 4.

VEGETATION ASSESSMENT

On April 28, 2021, WSP personnel returned to the Site to assess soil and vegetation impacts within the release extent. Vegetation surrounding the initially scraped area appeared to be unhindered by any potential residual soil impacts. There was no evidence of surficial staining throughout the release extent. Photographic documentation of the Site assessment is provided in Attachment 1.



REMEDIATION WORK PLAN

Vertical impacts within the release have been generally defined but additional sampling is required to define the lateral extent and further explore potential impacts within the release area east of SS01. Additional delineation will be advanced with a Shaw Tool, Ltd Portable Core Drill to extents practicable and/or compliant with the reclamation standard and Closure Criteria. The proposed delineation locations in accompaniment with previous delineation locations are depicted on Figure 2. Proposed delineation locations surrounding the release will be advanced no more than 1-foot bgs to represent immediate horizontal delineation.

If the caliche shelf is shown to be consistent and seemingly impermeable and field screening indicates that any remaining residual impacts have not migrated into the subsurface, WPX will submit a Variance and Closure Request to leave the caliche strata and the soil below in place. WSP and WPX believe that the removal of the indurated caliche will require significant heavy equipment and is not a practical means of remediation. WSP and WPX argue that the potential consequences that could arise from utilizing advanced equipment to investigate or remove remaining chloride impacts by fracturing the caliche formation barrier and forming a potential conduit to the subsurface could be greater than leaving the impacts in place.

CONCLUSION

Following successful delineation as demonstrated through laboratory analytical results, a Variance Closure Request will be provided to the NMOCD. Additional subsurface investigation will confirm if the Mescalero or other unnamed indurated caliche is present and exhibits impermeable properties. If such an impermeable nature of the caliche is observed, it is likely the formation will continue to restrict downward migration of residual TPH and chloride concentrations. Should the caliche ever be exposed by erosion, it will require significantly more water volume to remove any remaining TPH and chloride concentrations from the tightly grained formation. Therefore, a variance to leave elevated TPH and chloride in the caliche will not be a risk to the health of the community or environment.

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

Sincerely,

WSP USA Inc.

A handwritten signature in black ink that reads 'Anna Byers'.

Anna Byers
Consultant, Geologist

A handwritten signature in black ink that appears to read 'Daniel R. Moir'.

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



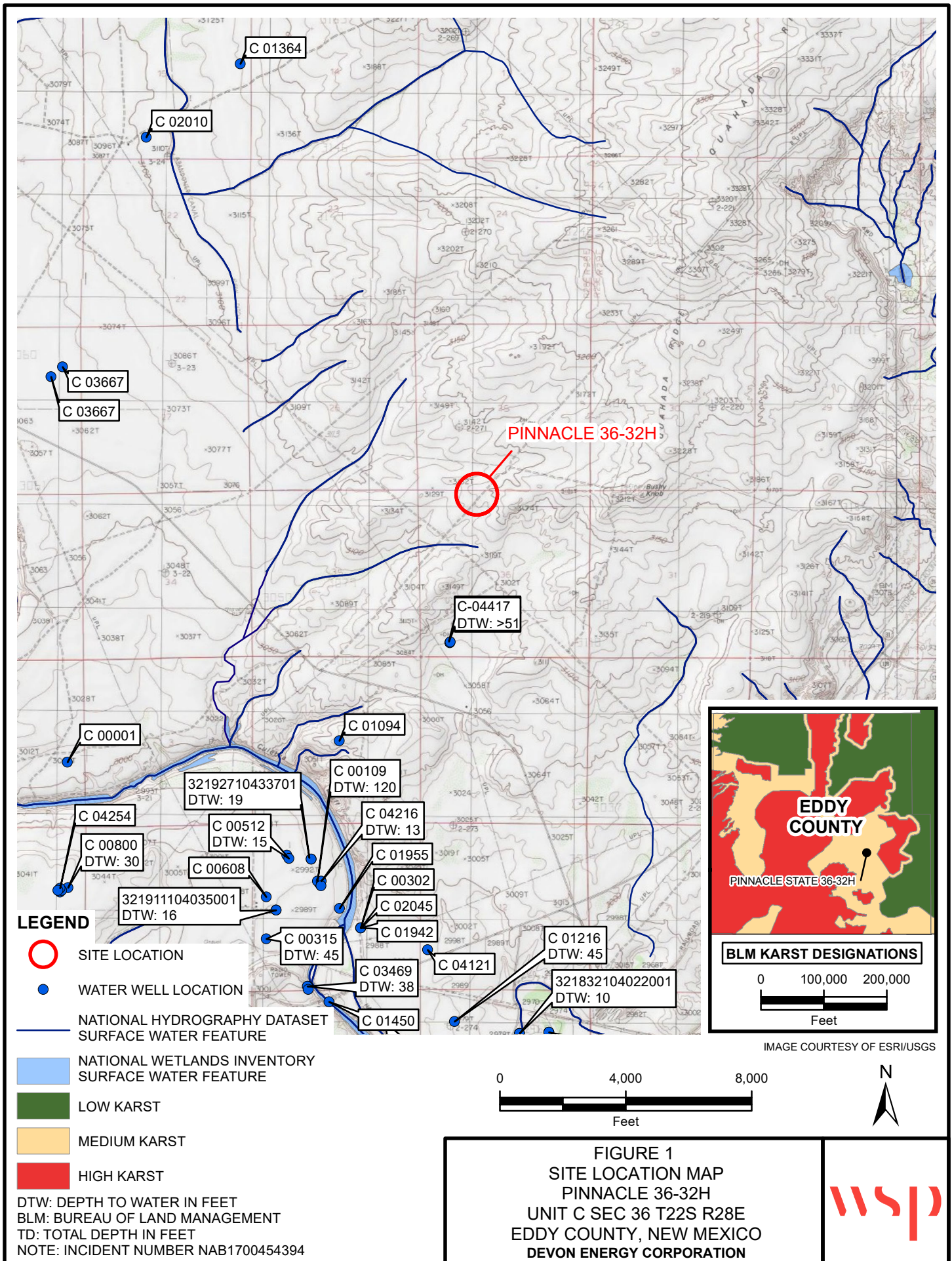
District II
Page 6

cc: Jim Raley, Devon
New Mexico State Land Office

Attachments:

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

FIGURES



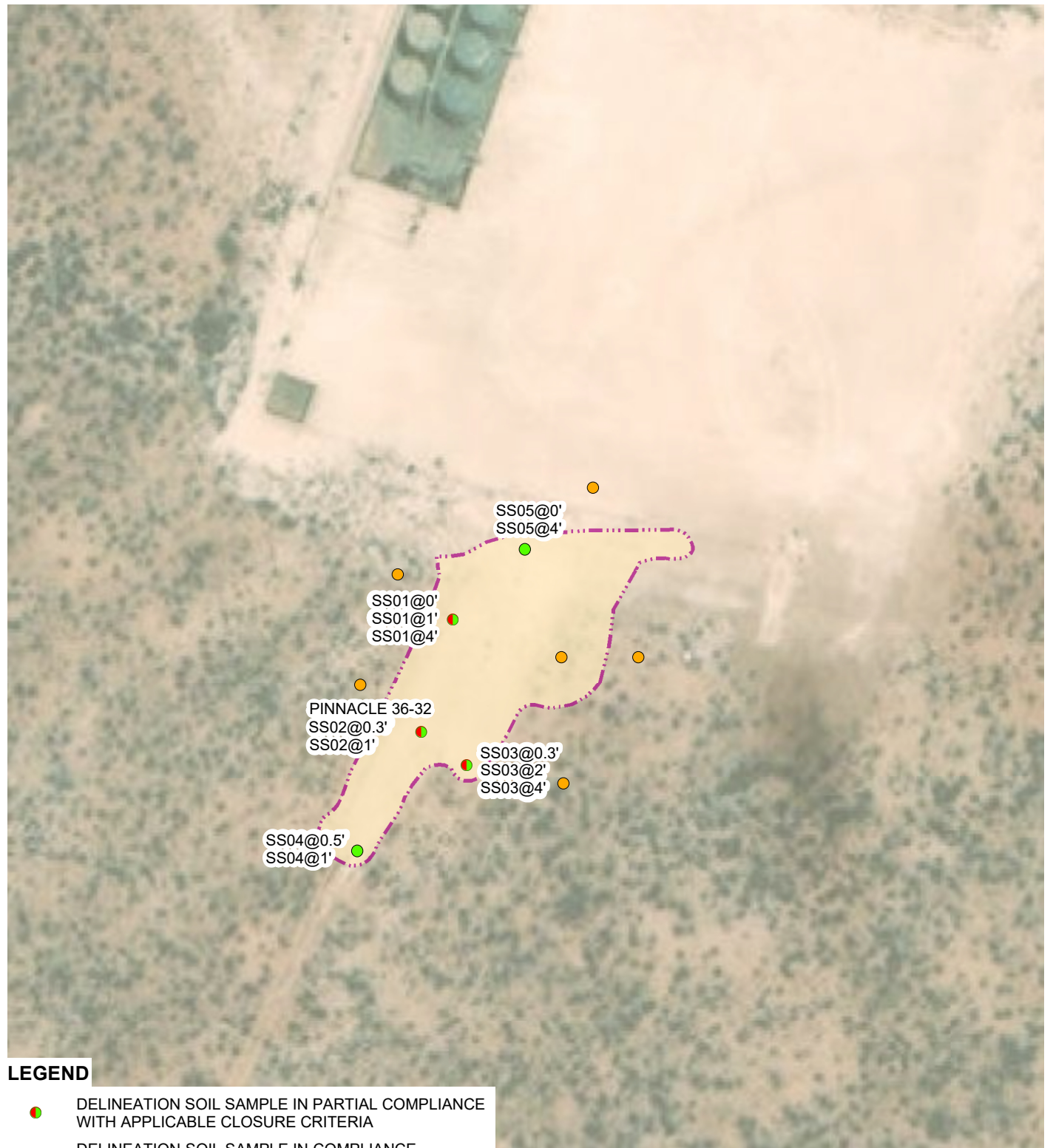
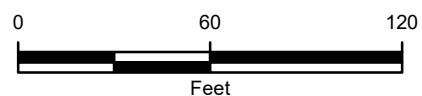


IMAGE COURTESY OF ESRI

LEGEND

- DELINEATION SOIL SAMPLE IN PARTIAL COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- PROPOSED SOIL SAMPLE
- RELEASE EXTENT MAPPED BY DEVON



NOTE: INCIDENT NUMBER nAB1700454394
(REMEDATION PERMIT NUMBER 2RP-4058)
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
PINNACLE 36-32H
UNIT C SEC 36 T22S R28E
EDDY COUNTY, NEW MEXICO
DEVON ENERGY CORPORATION



TABLES

Table 1

Soil Analytical Results
Pinnacle 36-32H
Incident Number nAB1700454394
WPX Energy Permian, LLC.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total 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	10,000
Delineation Samples										
SS01	09/28/2018	Surface	<0.00200	<0.00200	1,340	<15.0	39.5	1,340	1,380	1,030*
SS01	10/05/2018	1	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	681*
SS01	10/11/2018	4	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	221
Pinnacle 36-32	01/18/2017	NA	<0.039	<0.039	1,400	<3.2	940	1,400	2,340	2,900*
SS02	09/28/2018	0.3	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	5,050*
SS02	10/05/2018	1	<0.00199	<0.00199	<15.0	19.9	<15.0	19.9	19.9	392
SS03	09/28/2018	0.3	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	5,510*
SS03	10/05/2018	2	<0.00200	<0.00200	<15.0	28.3	<15.0	28.3	28.3	1,310*
SS03	10/11/2018	4	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	73.5
SS04	09/28/2018	0.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	148
SS04	10/05/2018	1	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SS05	09/28/2018	Surface	<0.00200	<0.00200	66.2	<15.0	25.2	66.2	91.4	343
SS05	10/05/2018	4	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	818

Notes

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

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

NE - Not Established

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

* - indicates sample was collected in area to be reclaimed;

reclamation criteria in the top 4 feet of soil is 100 mg/kg for TPH and 600 mg/kg for chloride

WSP

P:\WPX_Devon\Permian\1-New Mexico Sites\Pinnacle sites\NEW Pinnacle State 36-32\Office\Table\Table - Pinnacle 36-32H - with WPX data.xlsx

ATTACHMENT 1: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG

WPX Energy Permian, LLC.	Pinnacle 36-32H Eddy County, NM	TE034821012
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Photo No.	Date	
1	December 21, 2016	
Initial photo of the release facing south-southeast.		 An aerial photograph showing a desert landscape with sparse, low-lying vegetation and patches of bare, light-colored soil. A dark, linear feature, likely a pipeline or road, runs diagonally across the middle of the frame. The background shows a hazy horizon under a pale sky.


Photo No.	Date	
2	September 28, 2018	
South view of the Site before delineation activities.		 A ground-level photograph of a desert landscape. The foreground is dominated by a wide, light-brown dirt path or road that stretches towards the horizon. The surrounding area is covered with sparse, low-lying green and brown shrubs. The sky is clear and blue.



PHOTOGRAPHIC LOG

WPX Energy Permian, LLC.	Pinnacle 36-32H Eddy County, NM	TE034821012
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Photo No.	Date	
3	April 28, 2021	
Southwest view of the Site during the Vegetation Assessment.		

Photo No.	Date	
4	April 28, 2021	
Southwest view of the Site during the Vegetation Assessment.		

ATTACHMENT 2: REFERENCED WELL RECORD



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1		WELL TAG ID NO. Well Tag ID Not Issued		OSE FILE NO(S). C 04417			
	WELL OWNER NAME(S) WPX Energy				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 5315 Buena Vista Drive				CITY Carlsbad	STATE NM	ZIP 88220	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 20	SECONDS 35.4 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE -104	02	47.1 W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE M-36-22S-28E; Pinnacle State #25								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1789		NAME OF LICENSED DRILLER Mark Mumby			NAME OF WELL DRILLING COMPANY HRL Compliance Solutions		
	DRILLING STARTED 3/31/2020		DRILLING ENDED 3/31/2020		DEPTH OF COMPLETED WELL (FT) 55	BORE HOLE DEPTH (FT) 55	DEPTH WATER FIRST ENCOUNTERED (FT) Water was not encountered	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) Water was not present in the well after 48-hour		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	45	6.25	Blank PVC	Flush Thread	2.0	0.154	0.010
	45	55	6.25	Factory Slotted PVC Screen	Flush Thread	2.0	0.154	0.010
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
				No Annular Seal Material or Gravel Pack	None			

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2


	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
4. HYDROGEOLOGIC LOG OF WELL	0	55	55	Silt/Sand with Interbedded caliche	Y ✓ N	0.00
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
	METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:					TOTAL ESTIMATED WELL YIELD (gpm):
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER – SPECIFY: Water Not Encountered					0.00	


5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	MISCELLANEOUS INFORMATION: Well was drilled to determine depth to groundwater in the area. The well was a temporary well. The well was monitored for the presence of water 48-hours after drilling was complete; water was not encountered in the well at this time. The well was subsequently abandoned on 4/3/2020.	
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Calvin (Kelly) Padilla	


6. SIGNATURE	BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.	
	<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> SIGNATURE OF DRILLER / PRINT SIGNEE NAME </div> <div style="text-align: center;"> Mark Mumby DATE </div> </div>	<div style="text-align: center;"> DATE </div>


FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 04/30/2019)	
FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO	PAGE 2 OF 2


ATTACHMENT 3: LITHOLOGIC/SOIL SAMPLING LOGS

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Name: SS01 Sample Collection Dates: 9/28/2018, 10/5/2018, 10/11/2018	
LITHOLOGIC / SOIL SAMPLING LOG								Site Name: Pinnacle 36-32H Incident Number: NAB1700454394 Job Number: TE034821012	
Lat/Long: 32.35346767, -104.04257467				Field Screening: Chloride, PID		Hole Diameter: n/a		Total Depth: 4 feet bgs	
Comments: Chloride field screening was completed HACH low range chloride strips utilizing a dilution 4 part distilled water: 1 part soil. No correction factor included in reported field screened value.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
Dry	912	0	Yes	SS01	0.1	0	cche	ground surface sample collection depth - well consolidated caliche	
Dry	460	0	No	SS01	1	1	cche	well consolidated caliche, sample generated with backhoe and hammer attachment	
						2			
Dry	140	0	No			3		well consolidated caliche, sample generated with backhoe and hammer attachment	
Dry	164	0	No	SS01	4	4	cche	white, poorly consolidated caliche (hand auger sample collection)	
TOTAL DEPTH									

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Name:		Sample Collection Dates:	
								SS02		9/28/2018, 10/5/2018	
								Site Name: Pinnacle 36-32H			
								Incident Number: NAB1700454394			
Job Number: TE034821012											
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Lynda Laumbach		Methods: Backhoe, Backhoe with Hammer	
Lat/Long: 32.35333983, -104.0426345				Field Screening: Chloride, PID				Hole Diameter: n/a		Total Depth: 1 feet bgs	
Comments: Chloride field screening was completed HACH low range chloride strips utilizing a dilution 4 part distilled water: 1 part soil. No correction factor included in reported field screened value. ">" Indicates value exceeded HACH Low Range Chloride Strip range.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
Dry	>2,460	0	No	SS02	0.3	0	cche	ground surface sample collection depth - well consolidated caliche			
Dry	340	0	No	SS02	1	1	cche	well consolidated caliche, sample generated with backhoe			
TOTAL DEPTH											

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Name: SS03		Sample Collection Dates: 9/28/2018, 10/5/2018, 10/11/2018	
								Site Name: Pinnacle 36-32H			
								Incident Number: NAB1700454394			
								Job Number: TE034821012			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Lynda Laumbach		Methods: Hand Auger, Backhoe, Backhoe with Hammer	
Lat/Long: 32.353292, -104.04256967				Field Screening: Chloride, PID				Hole Diameter: n/a		Total Depth: 4 feet bgs	
Comments: Chloride field screening was completed HACH low range chloride strips utilizing a dilution 4 part distilled water: 1 part soil. No correction factor included in reported field screened value. ">" Indicates exceedence of chloride test strip range. BDL - Below detection limit of chloride test strip.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
Dry	>2,460	0	No	SS03	0.3	0	cche	well consolidated caliche			
Dry	1,136	0	No		1	1					
Dry	1,136	0	No	SS03	2	2	cche	well consolidated caliche, sample generated with backhoe and hammer attachment			
						3					
Dry	BDL	0	No	SS03	4	4	cche	white, poorly consolidated caliche (hand auger sample collection)			
TOTAL DEPTH											

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					Name:		Sample Collection Dates:	
					SS04		9/28/2018, 10/5/2018	
					Site Name: Pinnacle 36-32H			
					Incident Number: NAB1700454394			
				Job Number: TE034821012				
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Lynda Laumbach		Methods: Backhoe, Backhoe with Hammer	
Lat/Long: 32.35318867, -104.0427233			Field Screening: Chloride, PID		Hole Diameter: n/a		Total Depth: 1 feet bgs	
Comments: Chloride field screening was completed HACH low range chloride strips utilizing a dilution 4 part distilled water: 1 part soil. No correction factor included in reported field screened value. BDL - Below Detection Limit of HACH Low Range Chloride Strips.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
Dry	188	0	No	SS04	0.5	0	cche	ground surface sample collection depth - well consolidated caliche
Dry	BDL	0	No	SS04	1	1	cche	well consolidated caliche, sample generated with backhoe
TOTAL DEPTH								

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Name: SS05 Sample Collection Dates: 9/28/2018, 10/5/2018	
LITHOLOGIC / SOIL SAMPLING LOG								Site Name: Pinnacle 36-32H Incident Number: NAB1700454394 Job Number: TE034821012	
Lat/Long: 32.353565833, -104.04249167				Field Screening: Chloride, PID		Hole Diameter: n/a		Total Depth: 4 feet bgs	
Comments: Chloride field screening was completed HACH low range chloride strips utilizing a dilution 4 part distilled water: 1 part soil. No correction factor included in reported field screened value.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
Dry	304	0	No	SS05	0.1	0	cche	ground surface sample collection depth - well consolidated caliche	
Dry	608	0	No		1	1	cche	well consolidated caliche, sample generated with backhoe and hammer attachment	
						2			
						3			
Dry	556	0	No	SS05	4	4	cche	white, poorly consolidated caliche (hand auger sample collection)	
TOTAL DEPTH									

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS

Certificate of Analysis Summary 600816

LT Environmental, Inc., Arvada, CO

Project Name: Pinnacle 36-32H

Project Id:

Contact: Adrian Baker

Project Location: NM, Eddy 2RP-4058

Date Received in Lab: Sat 09.29.2018 09:00

Report Date: 06.08.2021 13:48

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	600816-001	600816-002	600816-003	600816-004	600816-005	
	<i>Field Id:</i>	SS01	SS03	SS04	SS02	SS05	
	<i>Depth:</i>	Surface-	4- In	6- In	4- In	Surface- In	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	09.28.2018 13:00	09.28.2018 13:15	09.28.2018 13:20	09.28.2018 13:30	09.28.2018 13:35	
BTEX by EPA 8021B	<i>Extracted:</i>	10.05.2018 16:45	10.05.2018 16:45	10.05.2018 16:45	10.05.2018 16:45	10.09.2018 08:00	
	<i>Analyzed:</i>	10.06.2018 12:42	10.06.2018 13:03	10.06.2018 13:24	10.06.2018 13:45	10.09.2018 15:37	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00402 0.00402	<0.00398 0.00398	<0.00401 0.00401	
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	
Inorganic Anions by EPA 300	<i>Extracted:</i>	10.03.2018 09:00	10.03.2018 09:00	10.03.2018 09:00	10.03.2018 09:00	10.03.2018 09:00	
	<i>Analyzed:</i>	10.03.2018 15:02	10.03.2018 15:07	10.03.2018 15:24	10.03.2018 15:30	10.03.2018 15:36	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		1030 5.03	5050 50.0	5510 50.0	148 4.97	343 5.01	
TPH by SW8015 Mod	<i>Extracted:</i>	10.03.2018 07:50	10.03.2018 07:50	10.02.2018 07:00	10.02.2018 07:00	10.02.2018 07:00	
	<i>Analyzed:</i>	** ** *	** ** *	10.02.2018 15:54	10.02.2018 16:13	10.02.2018 16:32	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		1340 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	66.2 15.0	
Motor Oil Range Hydrocarbons (MRO)		39.5 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	25.2 15.0	
Total TPH		1380 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	91.4 15.0	

BRL - Below Reporting Limit

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



Analytical Report 600816

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Pinnacle 36-32H

06.08.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

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)



06.08.2021

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **600816**

Pinnacle 36-32H

Project Address: NM, Eddy 2RP-4058

Adrian Baker:

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) 600816. 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. 600816 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,

A handwritten signature in black ink that reads "Jessica Kramer".

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 600816****LT Environmental, Inc., Arvada, CO**

Pinnacle 36-32H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	09.28.2018 13:00	Surface	600816-001
SS03	S	09.28.2018 13:15	4 In	600816-002
SS04	S	09.28.2018 13:20	6 In	600816-003
SS02	S	09.28.2018 13:30	4 In	600816-004
SS05	S	09.28.2018 13:35	Surface In	600816-005



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Pinnacle 36-32H*

Project ID:
Work Order Number(s): 600816

Report Date: 06.08.2021
Date Received: 09.29.2018

Sample receipt non conformances and comments:

Revision 06/08/2021 - Corrected project name per client email

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3065658 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3065825 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results 600816

LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS01** Matrix: Soil Date Received: 09.29.2018 09:00
 Lab Sample Id: 600816-001 Date Collected: 09.28.2018 13:00 Sample Depth: Surface
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM
 Analyst: SCM Date Prep: 10.03.2018 09:00 % Moisture:
 Seq Number: 3065322 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1030	5.03	mg/kg	10.03.2018 15:02		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM
 Analyst: ARM Date Prep: 10.03.2018 07:50 % Moisture:
 Seq Number: 3065180 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.03.2018 00:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	1340	15.0	mg/kg	10.03.2018 00:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	39.5	15.0	mg/kg	10.03.2018 00:16		1
Total TPH	PHC635	1380	15.0	mg/kg	10.03.2018 00:16		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ
 Analyst: ALJ Date Prep: 10.05.2018 16:45 % Moisture:
 Seq Number: 3065658 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.06.2018 12:42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.06.2018 12:42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.06.2018 12:42	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.06.2018 12:42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.06.2018 12:42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.06.2018 12:42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.06.2018 12:42	U	1



Certificate of Analytical Results 600816

LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS03** Matrix: Soil Date Received: 09.29.2018 09:00
 Lab Sample Id: 600816-002 Date Collected: 09.28.2018 13:15 Sample Depth: 4 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM
 Analyst: SCM Date Prep: 10.03.2018 09:00 % Moisture:
 Seq Number: 3065322 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5050	50.0	mg/kg	10.03.2018 15:07		10

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM
 Analyst: ARM Date Prep: 10.03.2018 07:50 % Moisture:
 Seq Number: 3065180 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.03.2018 00:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.03.2018 00:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.03.2018 00:35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.03.2018 00:35	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ
 Analyst: ALJ Date Prep: 10.05.2018 16:45 % Moisture:
 Seq Number: 3065658 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.06.2018 13:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.06.2018 13:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.06.2018 13:03	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.06.2018 13:03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.06.2018 13:03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.06.2018 13:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.06.2018 13:03	U	1



Certificate of Analytical Results 600816

LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS04** Matrix: Soil Date Received: 09.29.2018 09:00
 Lab Sample Id: 600816-003 Date Collected: 09.28.2018 13:20 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM
 Analyst: SCM Date Prep: 10.03.2018 09:00 % Moisture:
 Seq Number: 3065322 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5510	50.0	mg/kg	10.03.2018 15:24		10

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM
 Analyst: ARM Date Prep: 10.02.2018 07:00 % Moisture:
 Seq Number: 3065179 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.02.2018 15:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.02.2018 15:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.02.2018 15:54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.02.2018 15:54	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ
 Analyst: ALJ Date Prep: 10.05.2018 16:45 % Moisture:
 Seq Number: 3065658 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.06.2018 13:24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.06.2018 13:24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.06.2018 13:24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.06.2018 13:24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.06.2018 13:24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.06.2018 13:24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.06.2018 13:24	U	1



Certificate of Analytical Results 600816

LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS02** Matrix: Soil Date Received: 09.29.2018 09:00
 Lab Sample Id: 600816-004 Date Collected: 09.28.2018 13:30 Sample Depth: 4 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM
 Analyst: SCM Date Prep: 10.03.2018 09:00 % Moisture:
 Seq Number: 3065322 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	148	4.97	mg/kg	10.03.2018 15:30		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM
 Analyst: ARM Date Prep: 10.02.2018 07:00 % Moisture:
 Seq Number: 3065179 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.02.2018 16:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.02.2018 16:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.02.2018 16:13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.02.2018 16:13	U	1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ
 Analyst: ALJ Date Prep: 10.05.2018 16:45 % Moisture:
 Seq Number: 3065658 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.06.2018 13:45	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.06.2018 13:45	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.06.2018 13:45	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.06.2018 13:45	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.06.2018 13:45	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.06.2018 13:45	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.06.2018 13:45	U	1



Certificate of Analytical Results 600816

LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS05** Matrix: Soil Date Received: 09.29.2018 09:00
 Lab Sample Id: 600816-005 Date Collected: 09.28.2018 13:35 Sample Depth: Surface In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM
 Analyst: SCM Date Prep: 10.03.2018 09:00 % Moisture:
 Seq Number: 3065322 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	343	5.01	mg/kg	10.03.2018 15:36		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM
 Analyst: ARM Date Prep: 10.02.2018 07:00 % Moisture:
 Seq Number: 3065179 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.02.2018 16:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	66.2	15.0	mg/kg	10.02.2018 16:32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	25.2	15.0	mg/kg	10.02.2018 16:32		1
Total TPH	PHC635	91.4	15.0	mg/kg	10.02.2018 16:32		1

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ
 Analyst: ALJ Date Prep: 10.09.2018 08:00 % Moisture:
 Seq Number: 3065825 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.09.2018 15:37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.09.2018 15:37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.09.2018 15:37	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.09.2018 15:37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.09.2018 15:37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.09.2018 15:37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.09.2018 15:37	U	1

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **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



LT Environmental, Inc.
Pinnacle 36-32H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3065322

Matrix: Solid

Prep Method: E300P

MB Sample Id: 7663443-1-BLK

LCS Sample Id: 7663443-1-BKS

Date Prep: 10.03.2018

LCSD Sample Id: 7663443-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	266	106	265	106	90-110	0	20	mg/kg	10.03.2018 13:07	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3065322

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 600814-007

MS Sample Id: 600814-007 S

Date Prep: 10.03.2018

MSD Sample Id: 600814-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	133	248	395	106	399	107	90-110	1	20	mg/kg	10.03.2018 13:24	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3065322

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 600814-017

MS Sample Id: 600814-017 S

Date Prep: 10.03.2018

MSD Sample Id: 600814-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	336	248	585	100	587	101	90-110	0	20	mg/kg	10.03.2018 14:50	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3065179

Matrix: Solid

Prep Method: TX1005P

MB Sample Id: 7663403-1-BLK

LCS Sample Id: 7663403-1-BKS

Date Prep: 10.02.2018

LCSD Sample Id: 7663403-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	947	95	944	94	70-135	0	20	mg/kg	10.02.2018 08:45	
Diesel Range Organics (DRO)	<8.13	1000	962	96	962	96	70-135	0	20	mg/kg	10.02.2018 08:45	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3065180

Matrix: Solid

Prep Method: TX1005P

MB Sample Id: 7663404-1-BLK

LCS Sample Id: 7663404-1-BKS

Date Prep: 10.03.2018

LCSD Sample Id: 7663404-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1010	101	951	95	70-135	6	20	mg/kg	10.02.2018 17:28	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	989	99	70-135	8	20	mg/kg	10.02.2018 17:28	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3065179

Matrix: Soil

Prep Method: TX1005P

Parent Sample Id: 600814-001

MS Sample Id: 600814-001 S

Date Prep: 10.02.2018

MSD Sample Id: 600814-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	8.10	999	954	95	914	91	70-135	4	20	mg/kg	10.02.2018 09:41	
Diesel Range Organics (DRO)	<8.12	999	951	95	926	93	70-135	3	20	mg/kg	10.02.2018 09:41	

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 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



LT Environmental, Inc.
Pinnacle 36-32H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3065180

Parent Sample Id: 600815-001

Matrix: Soil

MS Sample Id: 600815-001 S

Prep Method: TX1005P

Date Prep: 10.03.2018

MSD Sample Id: 600815-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	11.1	998	881	87	903	89	70-135	2	20	mg/kg	10.02.2018 18:24	
Diesel Range Organics (DRO)	<8.11	998	910	91	918	92	70-135	1	20	mg/kg	10.02.2018 18:24	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3065658

MB Sample Id: 7663733-1-BLK

Matrix: Solid

LCS Sample Id: 7663733-1-BKS

Prep Method: SW5030B

Date Prep: 10.05.2018

LCSD Sample Id: 7663733-1-BSL

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.116	116	0.114	114	70-130	2	35	mg/kg	10.06.2018 03:28	
Toluene	<0.00200	0.0998	0.0994	100	0.103	103	70-130	4	35	mg/kg	10.06.2018 03:28	
Ethylbenzene	<0.00200	0.0998	0.112	112	0.113	113	70-130	1	35	mg/kg	10.06.2018 03:28	
m,p-Xylenes	<0.00399	0.200	0.226	113	0.233	116	70-130	3	35	mg/kg	10.06.2018 03:28	
o-Xylene	<0.00200	0.0998	0.115	115	0.118	118	70-130	3	35	mg/kg	10.06.2018 03:28	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3065825

MB Sample Id: 7663819-1-BLK

Matrix: Solid

LCS Sample Id: 7663819-1-BKS

Prep Method: SW5030B

Date Prep: 10.09.2018

LCSD Sample Id: 7663819-1-BSL

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.111	111	0.103	103	70-130	7	35	mg/kg	10.09.2018 08:09	
Toluene	<0.00201	0.100	0.0974	97	0.0908	91	70-130	7	35	mg/kg	10.09.2018 08:09	
Ethylbenzene	<0.00201	0.100	0.115	115	0.106	106	70-130	8	35	mg/kg	10.09.2018 08:09	
m,p-Xylenes	<0.00402	0.201	0.230	114	0.210	105	70-130	9	35	mg/kg	10.09.2018 08:09	
o-Xylene	<0.00201	0.100	0.116	116	0.106	106	70-130	9	35	mg/kg	10.09.2018 08:09	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3065658

Parent Sample Id: 600815-001

Matrix: Soil

MS Sample Id: 600815-001 S

Prep Method: SW5030B

Date Prep: 10.05.2018

MSD Sample Id: 600815-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0994	99	0.0996	99	70-130	0	35	mg/kg	10.06.2018 04:11	
Toluene	<0.00201	0.100	0.0851	85	0.0834	83	70-130	2	35	mg/kg	10.06.2018 04:11	
Ethylbenzene	<0.00201	0.100	0.0921	92	0.0930	92	70-130	1	35	mg/kg	10.06.2018 04:11	
m,p-Xylenes	<0.00402	0.201	0.185	92	0.182	90	70-130	2	35	mg/kg	10.06.2018 04:11	
o-Xylene	<0.00201	0.100	0.0943	94	0.0934	92	70-130	1	35	mg/kg	10.06.2018 04:11	

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

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

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

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



LT Environmental, Inc.
Pinnacle 36-32H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3065825

Parent Sample Id: 601306-001

Matrix: Soil

MS Sample Id: 601306-001 S

Prep Method: SW5030B

Date Prep: 10.09.2018

MSD Sample Id: 601306-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0742	74	0.0874	88	70-130	16	35	mg/kg	10.09.2018 08:51	
Toluene	<0.00199	0.0996	0.0682	68	0.0783	78	70-130	14	35	mg/kg	10.09.2018 08:51	X
Ethylbenzene	<0.00199	0.0996	0.0775	78	0.0889	89	70-130	14	35	mg/kg	10.09.2018 08:51	
m,p-Xylenes	<0.00398	0.199	0.141	71	0.165	83	70-130	16	35	mg/kg	10.09.2018 08:51	
o-Xylene	<0.00199	0.0996	0.0766	77	0.0887	89	70-130	15	35	mg/kg	10.09.2018 08:51	

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

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

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

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

Phoenix, Arizona (480-355-0900)

Page 1 of 1

Final 1.001

ORIGIN D:CAOA (5/5) 987-6245 XENCO SATURDAY PAC N MAIL 910 W PIERCE ST CARLSBAD NM 88220 UNITED STATES US	SHIP DATE: 28SEP18 ACTWGT: 52.00 LB CAD: 101813706IN/ET4040 DIMS: 26x14x14 IN BILL RECIPIENT
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TO HOLD FOR XENCO FEDEX OFFICE PRINT & SHIP CENTER FEDEX OFFICE PRINT & SHIP CENTER 200 W INTERSTATE 20 MIDLAND TX 79701 (806) 674-0639 REF: XENCO DEPT:	552J1F78C/DC45
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TRK# 7733 5649 3644 0201	SATURDAY HOLD PRIORITY OVERNIGHT HLD MAFKI TX-US LBB
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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 09/29/2018 09:00:00 AM

Work Order #: 600816

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist**Comments**

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 10/01/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/01/2018

Analytical Report 601916

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Pinnacle 36-32H

17-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



17-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **601916**

Pinnacle 36-32H

Project Address: NM Eddy 2RP-4058

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 601916. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 601916 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

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**Sample Cross Reference 601916****LT Environmental, Inc., Arvada, CO**

Pinnacle 36-32H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS04	S	10-05-18 10:10	1 ft	601916-001
SS02	S	10-05-18 10:30	1 ft	601916-002
SS03	S	10-05-18 11:30	2 ft	601916-003
SS01	S	10-05-18 11:50	1 ft	601916-004
SS05	S	10-05-18 13:15	4 ft	601916-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Pinnacle 36-32H

Project ID:

Work Order Number(s): 601916

Report Date: 17-OCT-18

Date Received: 10/10/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066628 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 601916

LT Environmental, Inc., Arvada, CO

Project Name: Pinnacle 36-32H



Project Id:

Contact: Adrian Baker

Project Location: NM Eddy 2RP-4058

Date Received in Lab: Wed Oct-10-18 10:45 am

Report Date: 17-OCT-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	601916-001	601916-002	601916-003	601916-004	601916-005	
	<i>Field Id:</i>	SS04	SS02	SS03	SS01	SS05	
	<i>Depth:</i>	1- ft	1- ft	2- ft	1- ft	4- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Oct-05-18 10:10	Oct-05-18 10:30	Oct-05-18 11:30	Oct-05-18 11:50	Oct-05-18 13:15	
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-15-18 16:45	Oct-15-18 16:45	Oct-15-18 16:45	Oct-15-18 16:45	Oct-15-18 16:45	
	<i>Analyzed:</i>	Oct-15-18 22:00	Oct-15-18 22:22	Oct-15-18 21:39	Oct-15-18 21:18	Oct-16-18 02:59	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	
Toluene		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	
Ethylbenzene		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	
m,p-Xylenes		<0.00404 0.00404	<0.00398 0.00398	<0.00399 0.00399	<0.00403 0.00403	<0.00401 0.00401	
o-Xylene		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	
Total Xylenes		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	
Total BTEX		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-15-18 10:00	Oct-15-18 10:00	Oct-15-18 10:00	Oct-15-18 10:00	Oct-15-18 10:00	
	<i>Analyzed:</i>	Oct-15-18 20:23	Oct-15-18 20:29	Oct-15-18 20:46	Oct-15-18 20:52	Oct-15-18 21:09	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		<4.95 4.95	392 4.99	1310 24.9	681 5.00	818 5.02	
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-13-18 11:00	Oct-13-18 11:00	Oct-13-18 11:00	Oct-13-18 11:00	Oct-13-18 11:00	
	<i>Analyzed:</i>	Oct-15-18 02:11	Oct-15-18 02:30	Oct-15-18 02:49	Oct-15-18 03:08	Oct-15-18 03:27	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	19.9 15.0	28.3 15.0	<14.9 14.9	<15.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	
Total TPH		<15.0 15.0	19.9 15.0	28.3 15.0	<14.9 14.9	<15.0 15.0	

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS04**
Lab Sample Id: 601916-001

Matrix: Soil
Date Collected: 10.05.18 10.10

Date Received: 10.10.18 10.45
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3066431

Date Prep: 10.15.18 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	10.15.18 20.23	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066664

Date Prep: 10.13.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.15.18 02.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.15.18 02.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.15.18 02.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.15.18 02.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.15.18 02.11	
o-Terphenyl	84-15-1	94	%	70-135	10.15.18 02.11	



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS04**
Lab Sample Id: 601916-001

Matrix: Soil
Date Collected: 10.05.18 10.10

Date Received: 10.10.18 10.45
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.15.18 16.45

Basis: Wet Weight

Seq Number: 3066628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.15.18 22.00	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.15.18 22.00	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.15.18 22.00	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	10.15.18 22.00	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.15.18 22.00	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.15.18 22.00	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.15.18 22.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	10.15.18 22.00		
1,4-Difluorobenzene	540-36-3	93	%	70-130	10.15.18 22.00		



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS02**
Lab Sample Id: 601916-002

Matrix: Soil
Date Collected: 10.05.18 10.30

Date Received: 10.10.18 10.45
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3066431

Date Prep: 10.15.18 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	392	4.99	mg/kg	10.15.18 20.29		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066664

Date Prep: 10.13.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	19.9	15.0	mg/kg	10.15.18 02.30		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.15.18 02.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.15.18 02.30	U	1
Total TPH	PHC635	19.9	15.0	mg/kg	10.15.18 02.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.15.18 02.30	
o-Terphenyl	84-15-1	92	%	70-135	10.15.18 02.30	



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS02**
Lab Sample Id: 601916-002

Matrix: Soil
Date Collected: 10.05.18 10.30

Date Received: 10.10.18 10.45
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.15.18 16.45

Basis: Wet Weight

Seq Number: 3066628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.15.18 22.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.15.18 22.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.15.18 22.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.15.18 22.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.15.18 22.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.15.18 22.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.15.18 22.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	87	%	70-130	10.15.18 22.22		
4-Bromofluorobenzene	460-00-4	102	%	70-130	10.15.18 22.22		



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS03**
Lab Sample Id: 601916-003

Matrix: Soil
Date Collected: 10.05.18 11.30

Date Received: 10.10.18 10.45
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3066431

Date Prep: 10.15.18 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1310	24.9	mg/kg	10.15.18 20.46		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066664

Date Prep: 10.13.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	28.3	15.0	mg/kg	10.15.18 02.49		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.15.18 02.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.15.18 02.49	U	1
Total TPH	PHC635	28.3	15.0	mg/kg	10.15.18 02.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.15.18 02.49	
o-Terphenyl	84-15-1	94	%	70-135	10.15.18 02.49	



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS03**
Lab Sample Id: 601916-003

Matrix: Soil
Date Collected: 10.05.18 11.30

Date Received: 10.10.18 10.45
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.15.18 16.45

Basis: Wet Weight

Seq Number: 3066628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.15.18 21.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.15.18 21.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.15.18 21.39	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.15.18 21.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.15.18 21.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.15.18 21.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.15.18 21.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	86	%	70-130	10.15.18 21.39		
4-Bromofluorobenzene	460-00-4	97	%	70-130	10.15.18 21.39		



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS01**
Lab Sample Id: 601916-004

Matrix: Soil
Date Collected: 10.05.18 11.50

Date Received: 10.10.18 10.45
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3066431

Date Prep: 10.15.18 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	681	5.00	mg/kg	10.15.18 20.52		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066664

Date Prep: 10.13.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.15.18 03.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.15.18 03.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.15.18 03.08	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.15.18 03.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.15.18 03.08	
o-Terphenyl	84-15-1	95	%	70-135	10.15.18 03.08	



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS01**
Lab Sample Id: 601916-004

Matrix: Soil
Date Collected: 10.05.18 11.50

Date Received: 10.10.18 10.45
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.15.18 16.45

Basis: Wet Weight

Seq Number: 3066628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.15.18 21.18	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.15.18 21.18	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.15.18 21.18	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.15.18 21.18	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.15.18 21.18	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.15.18 21.18	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.15.18 21.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	10.15.18 21.18		
1,4-Difluorobenzene	540-36-3	88	%	70-130	10.15.18 21.18		



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS05**
Lab Sample Id: 601916-005

Matrix: Soil
Date Collected: 10.05.18 13.15

Date Received: 10.10.18 10.45
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3066431

Date Prep: 10.15.18 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	818	5.02	mg/kg	10.15.18 21.09		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066664

Date Prep: 10.13.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.15.18 03.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.15.18 03.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.15.18 03.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.15.18 03.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	10.15.18 03.27	
o-Terphenyl	84-15-1	91	%	70-135	10.15.18 03.27	



Certificate of Analytical Results 601916



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS05**
Lab Sample Id: 601916-005

Matrix: Soil
Date Collected: 10.05.18 13.15

Date Received: 10.10.18 10.45
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.15.18 16.45

Basis: Wet Weight

Seq Number: 3066628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.16.18 02.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.16.18 02.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.16.18 02.59	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.16.18 02.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.16.18 02.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.16.18 02.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.16.18 02.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.16.18 02.59		
1,4-Difluorobenzene	540-36-3	96	%	70-130	10.16.18 02.59		



Flagging Criteria



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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Pinnacle 36-32H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066431

MB Sample Id: 7664174-1-BLK

Matrix: Solid

LCS Sample Id: 7664174-1-BKS

Prep Method: E300P

Date Prep: 10.15.18

LCSD Sample Id: 7664174-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	260	104	251	100	90-110	4	20	mg/kg	10.15.18 18:58	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066431

Parent Sample Id: 601915-006

Matrix: Soil

MS Sample Id: 601915-006 S

Prep Method: E300P

Date Prep: 10.15.18

MSD Sample Id: 601915-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	248	99	249	100	90-110	0	20	mg/kg	10.15.18 19:15	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066431

Parent Sample Id: 601916-002

Matrix: Soil

MS Sample Id: 601916-002 S

Prep Method: E300P

Date Prep: 10.15.18

MSD Sample Id: 601916-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	392	250	639	99	639	99	90-110	0	20	mg/kg	10.15.18 20:35	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3066664

MB Sample Id: 7664109-1-BLK

Matrix: Solid

LCS Sample Id: 7664109-1-BKS

Prep Method: TX1005P

Date Prep: 10.13.18

LCSD Sample Id: 7664109-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1040	104	1040	104	70-135	0	20	mg/kg	10.14.18 19:51	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	1090	109	70-135	2	20	mg/kg	10.14.18 19:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		130		126		70-135	%	10.14.18 19:51
o-Terphenyl	102		127		108		70-135	%	10.14.18 19:51

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

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

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

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



LT Environmental, Inc.

Pinnacle 36-32H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3066664

Parent Sample Id: 601915-001

Matrix: Soil

MS Sample Id: 601915-001 S

Prep Method: TX1005P

Date Prep: 10.13.18

MSD Sample Id: 601915-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.1	999	854	84	887	87	70-135	4	20	mg/kg	10.14.18 20:49	
Diesel Range Organics (DRO)	587	999	1610	102	1610	102	70-135	0	20	mg/kg	10.14.18 20:49	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		123		70-135	%	10.14.18 20:49
o-Terphenyl	105		103		70-135	%	10.14.18 20:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066628

MB Sample Id: 7664298-1-BLK

Matrix: Solid

LCS Sample Id: 7664298-1-BKS

Prep Method: SW5030B

Date Prep: 10.15.18

LCSD Sample Id: 7664298-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0925	93	0.114	113	70-130	21	35	mg/kg	10.15.18 18:49	
Toluene	<0.00201	0.100	0.0798	80	0.102	101	70-130	24	35	mg/kg	10.15.18 18:49	
Ethylbenzene	<0.00201	0.100	0.0929	93	0.108	107	70-130	15	35	mg/kg	10.15.18 18:49	
m,p-Xylenes	<0.00402	0.201	0.189	94	0.232	115	70-130	20	35	mg/kg	10.15.18 18:49	
o-Xylene	<0.00201	0.100	0.0926	93	0.120	119	70-130	26	35	mg/kg	10.15.18 18:49	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		73		88		70-130	%	10.15.18 18:49
4-Bromofluorobenzene	98		84		112		70-130	%	10.15.18 18:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066628

Parent Sample Id: 601915-005

Matrix: Soil

MS Sample Id: 601915-005 S

Prep Method: SW5030B

Date Prep: 10.15.18

MSD Sample Id: 601915-005 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	0.100	0.104	104	0.0976	98	70-130	6	35	mg/kg	10.15.18 19:32	
Toluene	<0.00201	0.100	0.0883	88	0.0765	77	70-130	14	35	mg/kg	10.15.18 19:32	
Ethylbenzene	<0.00201	0.100	0.0954	95	0.0828	83	70-130	14	35	mg/kg	10.15.18 19:32	
m,p-Xylenes	<0.00402	0.201	0.190	95	0.162	81	70-130	16	35	mg/kg	10.15.18 19:32	
o-Xylene	<0.00201	0.100	0.0925	93	0.0798	80	70-130	15	35	mg/kg	10.15.18 19:32	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		86		70-130	%	10.15.18 19:32
4-Bromofluorobenzene	100		103		70-130	%	10.15.18 19:32

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

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

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

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

Phoenix, Arizona (480-355-0900)

CHAIN OF CUSTODY

Page 1 of 1

www.xenco.com

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes				
Company Name / Branch: LT Environmental, Inc.				Project Name/Number: Pineale 36-32H								W = Water S = Soil/Sediment GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water O = Oil WW = Waste Water A = Air				
Company Address: 3300 NW 8th St. Building Unit 103 Miami, FL 33142				Project Location: NM EDDY 2RPD-4058												
Email: abab@ltenv.com (432) 704-5178				Invoice To: LT Environmental - Adrian Baker												
Project Contact: Adrian Baker				PO Number: 34818010												
Sampler's Name L. Baker																
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments	
1		SS04	1'	10/6/14	10:10	S	1								X	PTEX (only DTEX) 8021 TPH (PRO, GRO, MPU) 8015 chloride 300.00 bulkier refusal ↓
2		SS02	1'		10:30	S	1								X	
3		SS03	2'		11:30	S	1								X	
4		SS01	1'		11:50	S	1								X	
5		SS05	4'		13:15	S	1								X	
6																
7																
8																
9																
10																
Data Deliverable Information																
Turnaround Time (Business days)																
Notes:																
<input type="checkbox"/> Same Day TAT <input type="checkbox"/> 5 Day TAT <input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level IV (Full Data Pkg /raw data) <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> 2 Day EMERGENCY <input checked="" type="checkbox"/> Contract TAT <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> UST / RG -411 <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> TRRP Checklist																
TAT Starts Day received by Lab, if received by 5:00 pm																
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																
FED-EX / UPS: Tracking # 734243015910																
Relinquished By Sample:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Relinquished By:		Date Time:		
1 <i>[Signature]</i>		10/6/14 16:11		2 <i>[Signature]</i>		10/8/14 15:30		1 <i>[Signature]</i>		10/10/14 10:45		2 <i>[Signature]</i>		10/10/14 10:45		
Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Relinquished By:		Date Time:		
3				3		4		4				4				
Relinquished by:		Date Time:		Custody Seal #		Preserved where applicable		On Ice		Cooler Temp.		Thermo Corr. Factor				
5				5				X		3.1		28.0.0				

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



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 10/10/2018 10:45:00 AM

Work Order #: 601916

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist**Comments**

#1 *Temperature of cooler(s)?	3.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 10/10/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/10/2018

Analytical Report 602357

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Pinnacle 36-32H

23-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



23-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **602357**

Pinnacle 36-32H

Project Address: Eddy, NM 2RP-4058

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 602357. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 602357 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 602357



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS03	S	10-11-18 12:20	4 ft	602357-001
SS01	S	10-11-18 14:25	4 ft	602357-002

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: Pinnacle 36-32H**

Project ID:

Work Order Number(s): 602357

Report Date: 23-OCT-18

Date Received: 10/13/2018

Sample receipt non conformances and comments:None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066898 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3067142 Inorganic Anions by EPA 300

Nitrite as N RPD was outside laboratory control limits.

Samples in the analytical batch are: 602357-001

Batch: LBA-3067144 Inorganic Anions by EPA 300

Lab Sample ID 602570-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 602357-002.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analysis Summary 602357

LT Environmental, Inc., Arvada, CO

Project Name: Pinnacle 36-32H



Project Id:

Contact: Adrian Baker

Project Location: Eddy, NM 2RP-4058

Date Received in Lab: Sat Oct-13-18 09:00 am

Report Date: 23-OCT-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	602357-001	602357-002				
	Field Id:	SS03	SS01				
	Depth:	4- ft	4- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Oct-11-18 12:20	Oct-11-18 14:25				
BTEX by EPA 8021B	Extracted:	Oct-18-18 16:00	Oct-18-18 16:00				
	Analyzed:	Oct-19-18 02:02	Oct-19-18 02:23				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00199 0.00199	<0.00200 0.00200				
Toluene		<0.00199 0.00199	<0.00200 0.00200				
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200				
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401				
o-Xylene		<0.00199 0.00199	<0.00200 0.00200				
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200				
Total BTEX		<0.00199 0.00199	<0.00200 0.00200				
Inorganic Anions by EPA 300	Extracted:	Oct-20-18 16:00	Oct-20-18 16:30				
	Analyzed:	Oct-20-18 23:38	Oct-22-18 09:42				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		73.5 4.98	221 4.98				
TPH by SW8015 Mod	Extracted:	Oct-17-18 17:00	Oct-17-18 17:00				
	Analyzed:	Oct-18-18 01:12	Oct-18-18 01:30				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0				
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0				
Total TPH		<15.0 15.0	<15.0 15.0				

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 602357



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS03**
Lab Sample Id: 602357-001

Matrix: Soil
Date Collected: 10.11.18 12.20

Date Received: 10.13.18 09.00
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067142

Date Prep: 10.20.18 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.5	4.98	mg/kg	10.20.18 23.38		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066702

Date Prep: 10.17.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 01.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 01.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 01.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 01.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.18.18 01.12	
o-Terphenyl	84-15-1	95	%	70-135	10.18.18 01.12	



Certificate of Analytical Results 602357



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS03**
Lab Sample Id: 602357-001

Matrix: Soil
Date Collected: 10.11.18 12.20

Date Received: 10.13.18 09.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3066898

Date Prep: 10.18.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.19.18 02.02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.19.18 02.02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.19.18 02.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.19.18 02.02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.19.18 02.02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.19.18 02.02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.19.18 02.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	10.19.18 02.02		
1,4-Difluorobenzene	540-36-3	117	%	70-130	10.19.18 02.02		



Certificate of Analytical Results 602357



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS01**
 Lab Sample Id: 602357-002

Matrix: Soil
 Date Collected: 10.11.18 14.25

Date Received: 10.13.18 09.00
 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 10.20.18 16.30

Basis: Wet Weight

Seq Number: 3067144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	221	4.98	mg/kg	10.22.18 09.42		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 10.17.18 17.00

Basis: Wet Weight

Seq Number: 3066702

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 01.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 01.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 01.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 01.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.18.18 01.30	
o-Terphenyl	84-15-1	96	%	70-135	10.18.18 01.30	



Certificate of Analytical Results 602357



LT Environmental, Inc., Arvada, CO

Pinnacle 36-32H

Sample Id: **SS01**
Lab Sample Id: 602357-002

Matrix: Soil
Date Collected: 10.11.18 14.25

Date Received: 10.13.18 09.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3066898

Date Prep: 10.18.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.19.18 02.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.19.18 02.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.19.18 02.23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.19.18 02.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.19.18 02.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.19.18 02.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.19.18 02.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	10.19.18 02.23		
1,4-Difluorobenzene	540-36-3	109	%	70-130	10.19.18 02.23		



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.

RL Reporting Limit

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

PQL Practical Quantitation Limit **SQL** 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



LT Environmental, Inc.
Pinnacle 36-32H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067142

Matrix: Solid

Prep Method: E300P

MB Sample Id: 7664562-1-BLK

LCS Sample Id: 7664562-1-BKS

Date Prep: 10.20.18

LCSD Sample Id: 7664562-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	269	108	264	106	90-110	2	20	mg/kg	10.20.18 21:04	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067144

Matrix: Solid

Prep Method: E300P

MB Sample Id: 7664563-1-BLK

LCS Sample Id: 7664563-1-BKS

Date Prep: 10.20.18

LCSD Sample Id: 7664563-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	274	110	275	110	90-110	0	20	mg/kg	10.22.18 09:32	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067142

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 602356-006

MS Sample Id: 602356-006 S

Date Prep: 10.20.18

MSD Sample Id: 602356-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	49.0	250	322	109	324	110	90-110	1	20	mg/kg	10.20.18 22:34	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067142

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 602463-003

MS Sample Id: 602463-003 S

Date Prep: 10.20.18

MSD Sample Id: 602463-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1170	252	1380	83	1380	83	90-110	0	20	mg/kg	10.20.18 21:20	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067144

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 602357-002

MS Sample Id: 602357-002 S

Date Prep: 10.20.18

MSD Sample Id: 602357-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	221	249	531	124	531	124	90-110	0	20	mg/kg	10.22.18 09:48	X

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

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

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

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



LT Environmental, Inc.

Pinnacle 36-32H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067144

Parent Sample Id: 602570-003

Matrix: Soil

MS Sample Id: 602570-003 S

Prep Method: E300P

Date Prep: 10.20.18

MSD Sample Id: 602570-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.853	249	271	109	270	108	90-110	0	20	mg/kg	10.22.18 11:02	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3066702

MB Sample Id: 7664345-1-BLK

Matrix: Solid

LCS Sample Id: 7664345-1-BKS

Prep Method: TX1005P

Date Prep: 10.17.18

LCSD Sample Id: 7664345-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1130	113	1090	109	70-135	4	20	mg/kg	10.17.18 20:13	
Diesel Range Organics (DRO)	<8.13	1000	1140	114	1110	111	70-135	3	20	mg/kg	10.17.18 20:13	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	82		130		124		70-135	%	10.17.18 20:13
o-Terphenyl	86		117		105		70-135	%	10.17.18 20:13

Analytical Method: TPH by SW8015 Mod

Seq Number: 3066702

Parent Sample Id: 602207-011

Matrix: Soil

MS Sample Id: 602207-011 S

Prep Method: TX1005P

Date Prep: 10.17.18

MSD Sample Id: 602207-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	1020	102	1010	101	70-135	1	20	mg/kg	10.17.18 21:09	
Diesel Range Organics (DRO)	27.9	997	1060	104	1040	101	70-135	2	20	mg/kg	10.17.18 21:09	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		119		70-135	%	10.17.18 21:09
o-Terphenyl	111		106		70-135	%	10.17.18 21:09

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

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

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

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



LT Environmental, Inc.

Pinnacle 36-32H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066898

MB Sample Id: 7664468-1-BLK

Matrix: Solid

LCS Sample Id: 7664468-1-BKS

Prep Method: SW5030B

Date Prep: 10.18.18

LCSD Sample Id: 7664468-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.120	120	0.120	120	70-130	0	35	mg/kg	10.18.18 23:53	
Toluene	<0.00200	0.0998	0.105	105	0.108	108	70-130	3	35	mg/kg	10.18.18 23:53	
Ethylbenzene	<0.00200	0.0998	0.114	114	0.122	122	70-130	7	35	mg/kg	10.18.18 23:53	
m,p-Xylenes	<0.00399	0.200	0.236	118	0.247	124	70-130	5	35	mg/kg	10.18.18 23:53	
o-Xylene	<0.00200	0.0998	0.115	115	0.121	121	70-130	5	35	mg/kg	10.18.18 23:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		116		116		70-130	%	10.18.18 23:53
4-Bromofluorobenzene	101		123		127		70-130	%	10.18.18 23:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066898

Parent Sample Id: 602357-002

Matrix: Soil

MS Sample Id: 602357-002 S

Prep Method: SW5030B

Date Prep: 10.18.18

MSD Sample Id: 602357-002 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	0.100	0.0827	83	0.107	106	70-130	26	35	mg/kg	10.19.18 00:35	
Toluene	<0.00201	0.100	0.0736	74	0.0872	86	70-130	17	35	mg/kg	10.19.18 00:35	
Ethylbenzene	<0.00201	0.100	0.0883	88	0.0927	92	70-130	5	35	mg/kg	10.19.18 00:35	
m,p-Xylenes	<0.00402	0.201	0.177	88	0.183	91	70-130	3	35	mg/kg	10.19.18 00:35	
o-Xylene	<0.00201	0.100	0.0840	84	0.0889	88	70-130	6	35	mg/kg	10.19.18 00:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		123		70-130	%	10.19.18 00:35
4-Bromofluorobenzene	118		129		70-130	%	10.19.18 00:35

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

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

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

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



Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

CHAIN OF CUSTODY
Page 1 of 1

Page 1 Of 1

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: LI Environmental, Inc.				Project Name/Number: Pinnacle 36-32H				<div style="display: flex; justify-content: space-between;"> <div> W = Water S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface Water SL = Sludge OW = Ocean/Sea Water WI = Wipe WM = Waste Water A = Air </div> <div> Field Comments <div style="border: 1px solid black; padding: 5px; min-height: 100px;"> BTEX (only BTEX) 8021 TPH (DRO 6000) 8015 chloride (30000) </div> </div> </div>				Xenoco Job # <div style="font-size: 2em; font-weight: bold;">0007357</div>			
Company Address: 3300 W 4th St. Building 1 Unit 103 Midland, TX 79702				Project Location: EDDY NM											
Email: abaker@ltenv.com				Phone No: (432) 704-5178				PO Number: 34818010							
Project Contact: Adrian Baker				Sampler's Name: L. Linderbach											

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Notes
1		550.3	4/1	16/11	12:20	S	1								
2		550.1	4/1	10/11	14:25	S	1								
3															
4															
5															
6															
7															
8															
9															
10															

Turnaround Time (Business days)				Data Deliverable Information				Notes:			
<input type="checkbox"/> Same Day TAT <input type="checkbox"/> 5 Day TAT				<input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level IV (Full Data Pkg /raw data)							
<input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT				<input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> TRRP Level IV							
<input type="checkbox"/> 2 Day EMERGENCY <input checked="" type="checkbox"/> Contract TAT				<input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> UST / RG -411							
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist							

TAT Starts Day received by Lab. if received by 5:00 pm				FED-EX / UPS: Tracking #			
Relinquished by Sampler: [Signature] Date Time: 10/11/2018 15:50				Relinquished By: [Signature] Date Time: 10/12/18 15:30			
Relinquished by: [Signature] Date Time: 10/11/2018 15:50				Relinquished By: [Signature] Date Time: 10/12/18 15:30			
Relinquished by: [Signature] Date Time: 10/11/2018 15:50				Relinquished By: [Signature] Date Time: 10/12/18 15:30			

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenoco. It assigns standard terms and conditions of service. Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenoco. A minimum charge of \$75 will be applied to each project. Xenoco's liability will be limited to the cost of samples. Any samples received by Xenoco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.			
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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 10/13/2018 09:00:00 AM

Work Order #: 602357

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist**Comments**

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 10/15/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/15/2018

District I

1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 51006

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 51006
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	Based on the laboratory data, chloride results for SS04 at 6" (0.5 ft) is 5,510 mg/kg not 148 mg/kg. Additional horizontal delineation will need to be performed south of SS04 in addition to the proposed sample locations illustrated on Figure 2.	10/6/2022
bhall	2RP-4058 closed. Refer to incident #nAB1700454394 for all future communications.	10/6/2022
bhall	Please submit a complete report through the OCD Permitting website by 12/9/2022.	10/6/2022