HNH0T-190911-C-1410

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TALON LPE

Closure Report

West Red Lake Unit Water Station #001
Talon Project # 701307.120.01, *2RP-5440

Prepared For:

Lime Rock Resources
1111 Bagby St. Suite 4600
Houston, TX 77002

Prepared By:

TALON/LPE
408 W. Texas Avenue
Artesia, New Mexico 88210

August 19, 2019

Mr. Mike Bratcher
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Site Assessment & Closure Report**
WRLU Water Station #001
Eddy County, NM
2RP-5440

Dear Mr. Bratcher,

Lime Rock Resources has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above-referenced location. The results of our site assessment, soil analysis and closure request is contained herein.

Site Information

WRLU Water Station #001 is located approximately seven (7) miles southeast of Artesia, New Mexico. The legal location for this release is Unit Letter B, Section 7, Township 18 South and Range 27 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.769121 North and -104.314282 West. An Impact Area Map is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Gypsum lands. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Guadalupian in age and is comprised of weathered gypsum. Drainage courses in this area are well-drained.

Ground Water and Site Ranking

The New Mexico Office of the State Engineer web site indicates that the average depth to groundwater is 82' below ground surface (BGS). See Appendix II for the referenced groundwater data.

The site is not located within 300 feet of significant watercourse or wetland. The site is not located in a FEMA Flood Zone. However, the site is located within a high potential Karst area. Therefore, the NMOCD Table 1 Closure Criteria for Soils Impacted by a Release (19.15.29.12 NMAC) for this project are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 100 mg/kg for TPH and 600 mg/kg for Total Chlorides.

Incident Description

On May 18, 2019, a 2 7/8" IPC injection line was discovered to be leaking due to corrosion. A total of 135 barrels (bbls) of produced water were released inside the previously constructed bermed area off location. Vac trucks were dispatched and recovered 115 bbls of water.

Site Assessment

On May 29, 2019, Talon mobilized personnel to begin site assessment and soil sampling activities. Grab soil samples were collected within and around the impacted area utilizing a hand auger. Results from our initial sampling event are presented in the following data table. A complete laboratory report can be found in Appendix V.

5-29-19 Soil Samples

Sample ID	Depth (ft.)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
Closure Criteria IAW 19.15.29.12 NMAC		50 mg/kg	10 mg/kg				100 mg/kg	600 mg/kg
S-1	0	0.000885	ND	8.07	33.3	ND	41.37	**14600**
	1	0.000855	ND	ND	9.07	ND	9.07	**823**
S-2	0	0.000468	ND	ND	38.1	ND	38.1	**21800**
	1	0.000606	ND	14.1	26.3	ND	40.4	**6390**
S-3	0	0.00115	ND	ND	16.1	ND	16.1	**23800**
	1	ND	ND	1800	2440	12.5	**4252.5**	**5490**
S-4	0	0.255	0.00169	16.1	54.9	ND	71	**39800**
S-5	0	0.00274	ND	ND	15.7	ND	15.7	**41500**
	1	0.00144	0.000699	14.6	853	162	**1029.6**	**4530**

ND= Not Detected

Remedial Actions:

- The impacted area in the vicinity of S-2 through S-3 was excavated to a depth of 5.0-feet BGS where the excavation was met with hard rock refusal. Once the excavation was complete, a hydrovac was used and the rock surface washed off. A bentonite clay liner was then installed at the bottom of the excavation. Two feet of backfill was placed over the bentonite liner and a 40 mil-liner was then installed at the bottom and over the newly reconstructed berm. The liner was installed to capture future releases and facilitate vac truck recovery efforts.

- The impacted area in the vicinity of S-4 through S-5 was hand-excavated to a depth of 2.0-feet BGS until it was met with hard rock refusal. This area was hand-excavated due to presence of multiple flow lines and inaccessibility of heavy equipment.

- The work area was contoured and sloped to funnel potential spills into the lined and bermed collection area in order to mitigate future incidents of this nature.

- All contaminated soil was transported to Lea Land, LLC, a NMOCD approved soil waste disposal facility.

- The excavated area was backfilled with clean caliche, machine compacted and contoured to match the surrounding location.

- See Appendix IV Photographic Documentation for initial, excavation, installation and completed photos.

- A Final C-141 is attached in Appendix III.

Closure

On behalf of Lime Rock Resources, we respectfully request that no further actions be required at this site and that closure with regard to this incident be granted.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-746-8768.

Respectfully submitted,

TALON/LPE

Chris Jones
Project Manager

David J Adkins
District Manager

Attachments:

Appendix I	Impact Area Map, TOPO Map, Karst Map, Locator Map
Appendix II	Soil Survey, Groundwater Data & FEMA Flood Zone
Appendix III	Final C-141
Appendix IV	Photographic Documentation
Appendix V	Laboratory Data

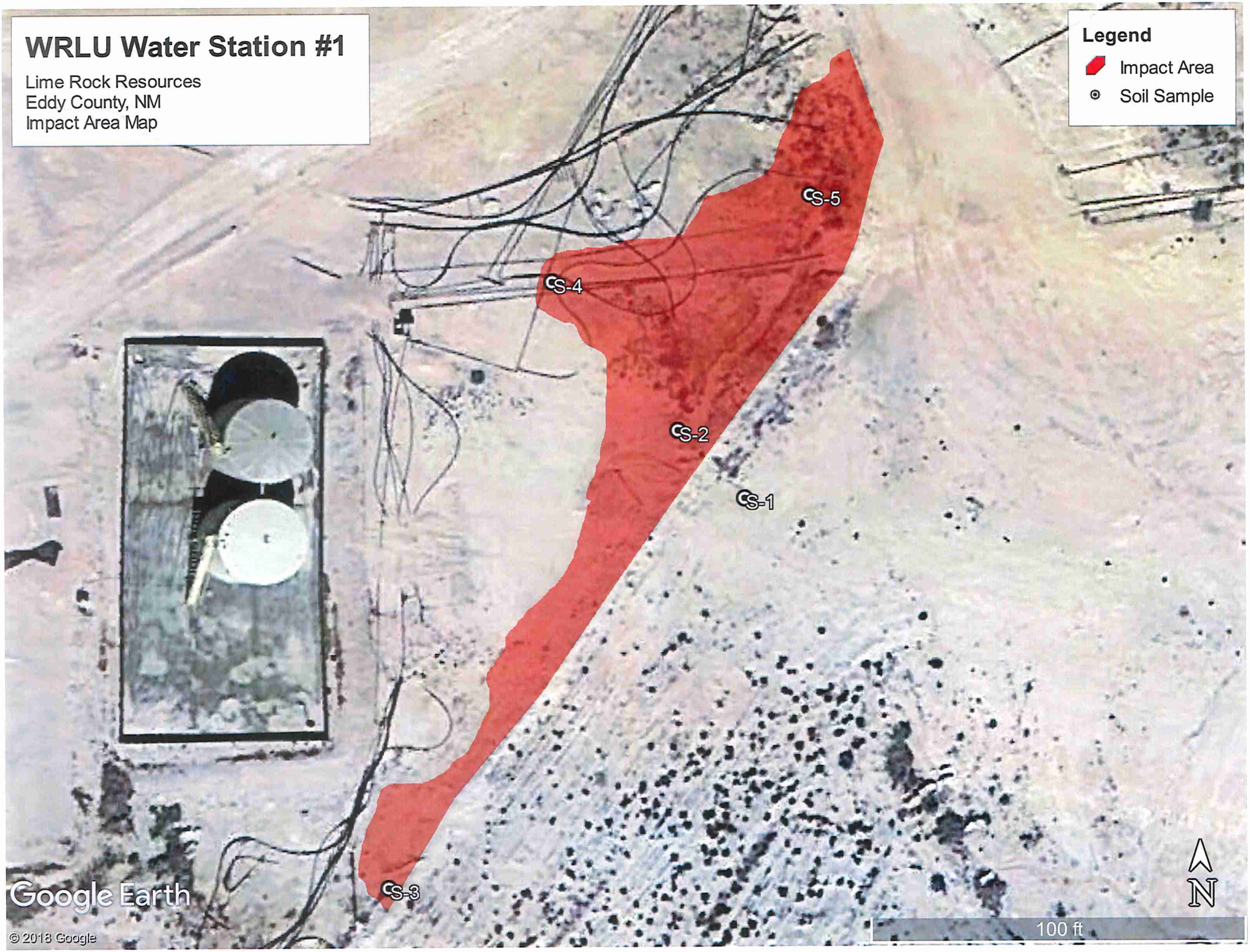
APPENDIX I

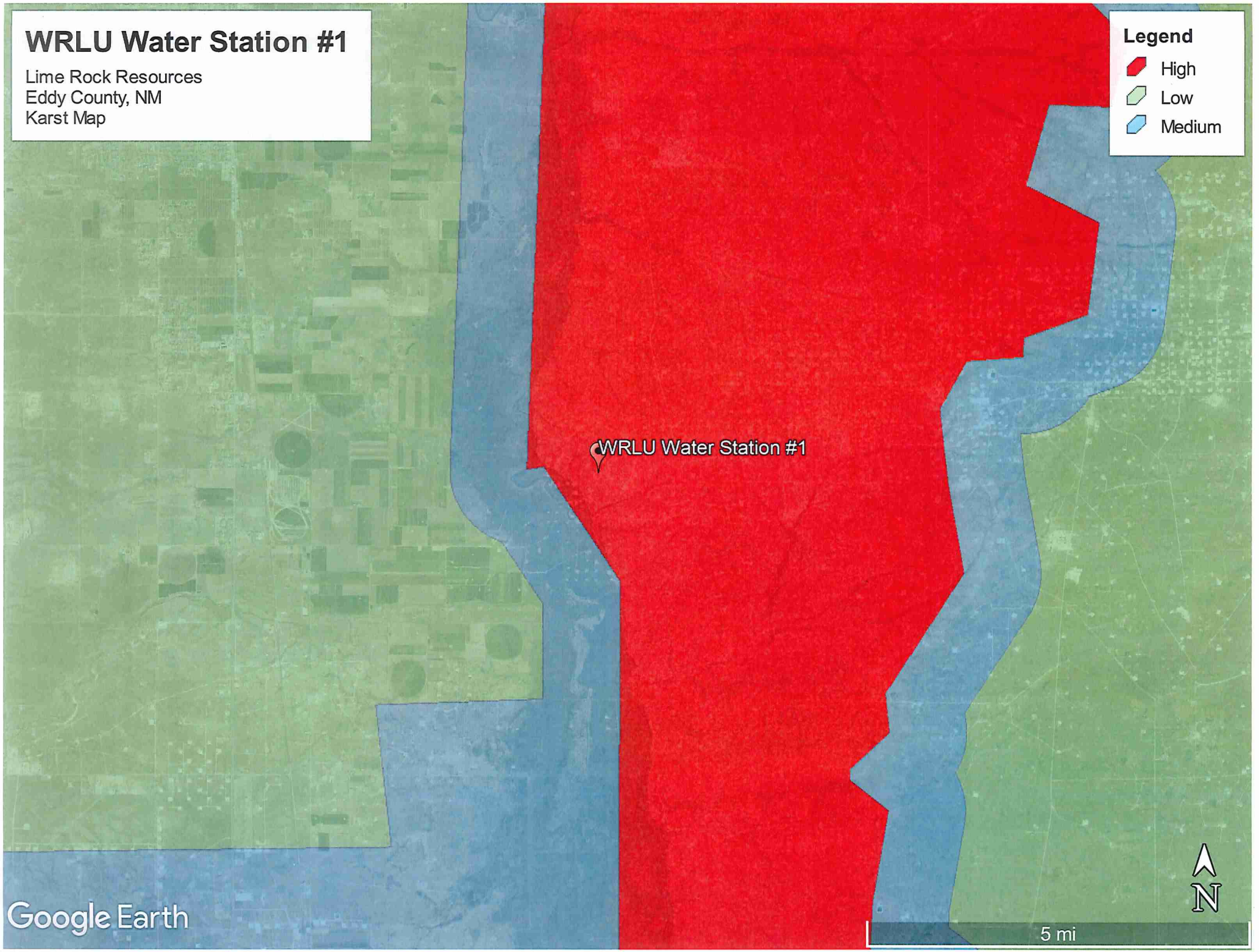
IMPACT AREA MAP

KARST MAP

TOPO MAP

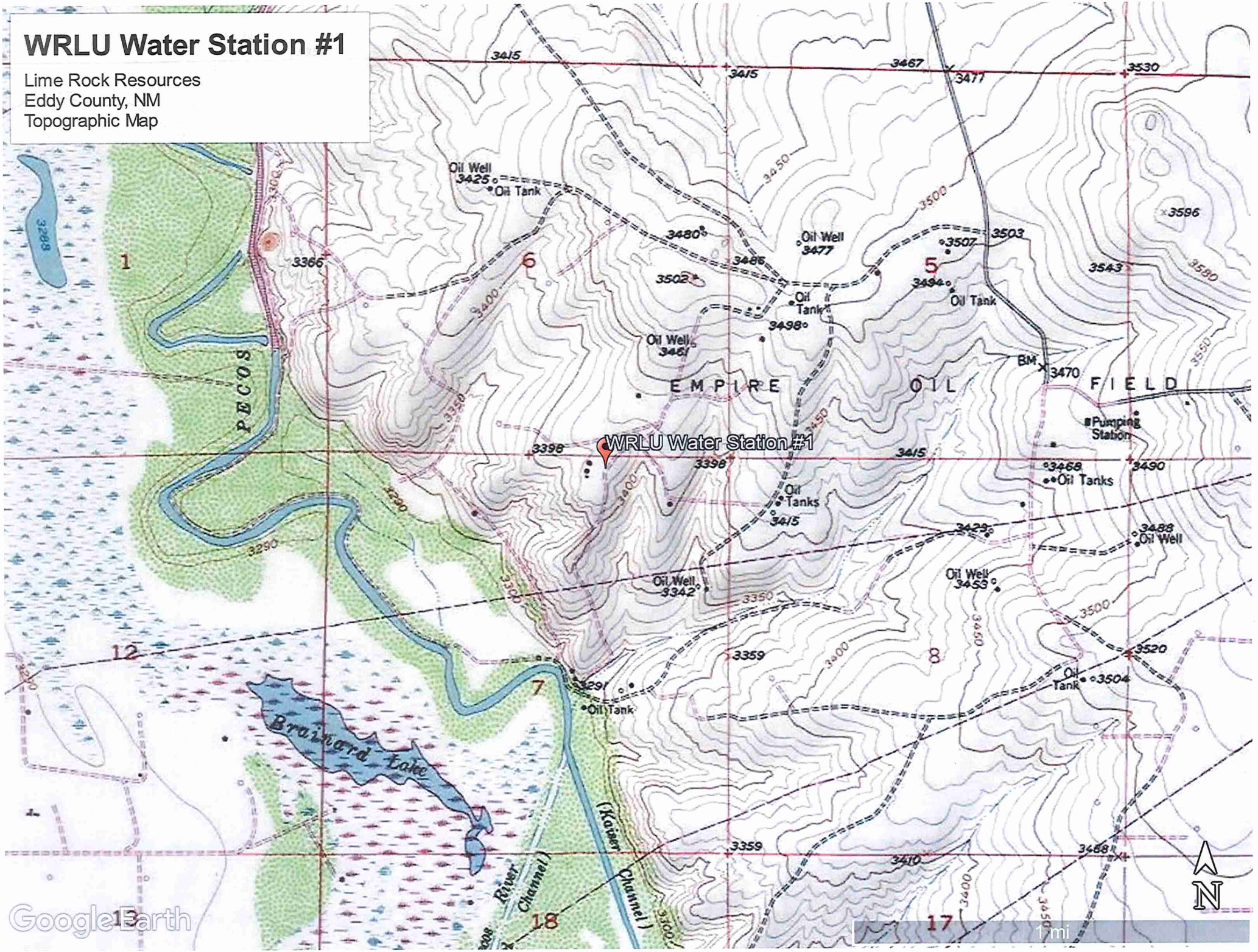
LOCATOR MAP

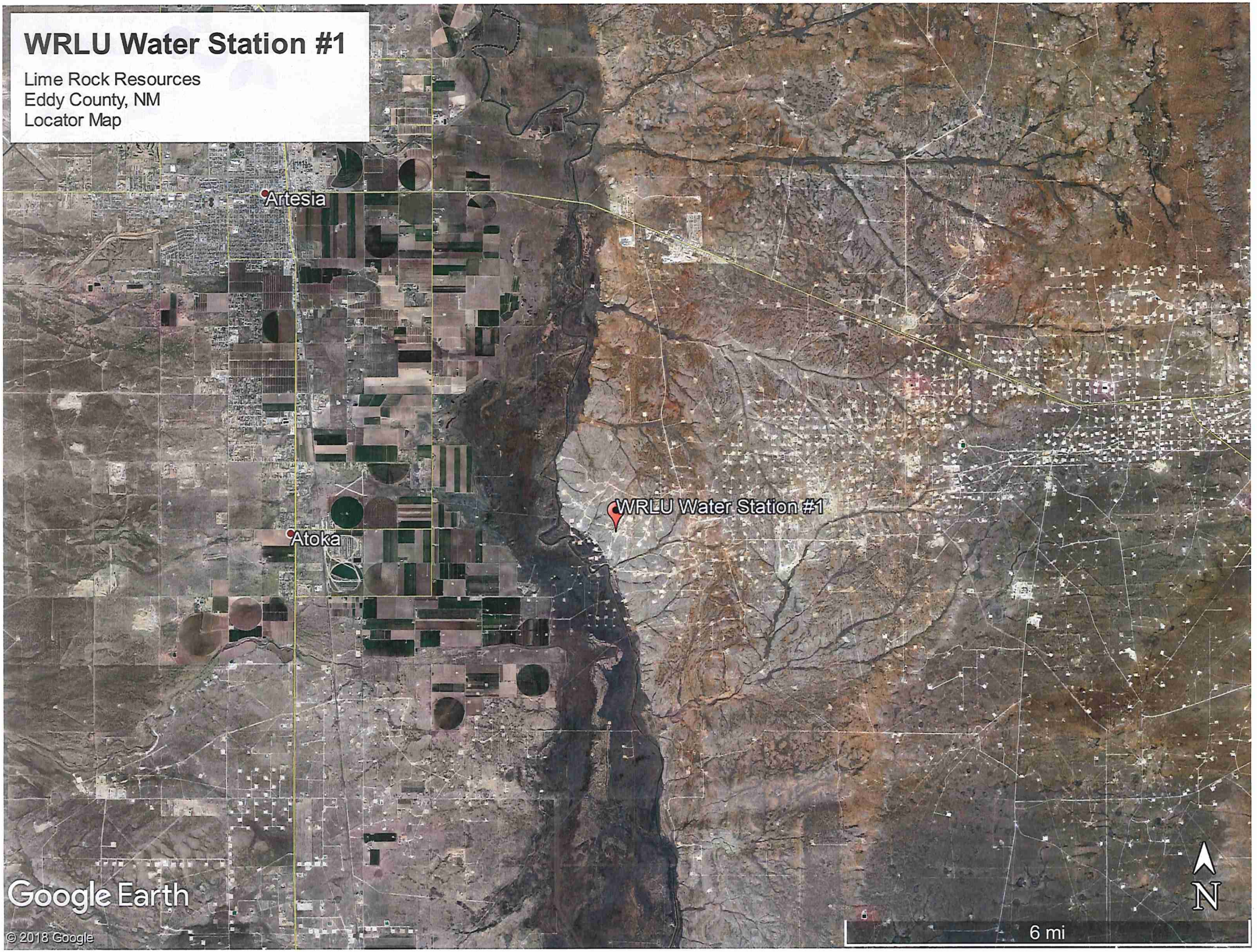

WRLU Water Station #1
Lime Rock Resources
Eddy County, NM
Impact Area Map
Legend
Impact Area
Soil Sample
CS-5
CS-4
CS-2
CS-1
CS-3
Google Earth
© 2018 Google
N
100 ft


WRLU Water Station #1
Lime Rock Resources
Eddy County, NM
Karst Map
Legend
High
Low
Medium
WRLU Water Station #1
Google Earth
N
5 mi

WRLU Water Station #1

Lime Rock Resources
Eddy County, NM
Topographic Map




WRLU Water Station #1
Lime Rock Resources
Eddy County, NM
Locator Map
Artesia
Atoka
WRLU Water Station #1
Google Earth
© 2018 Google
N
6 mi

APPENDIX II

SOIL SURVEY

GROUNDWATER DATA

FEMA FLOOD ZONE

Eddy Area, New Mexico

GA—Gypsum land

Map Unit Setting

National map unit symbol: 1w4f
Elevation: 1,250 to 5,000 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 57 to 66 degrees F
Frost-free period: 190 to 225 days
Farmland classification: Not prime farmland

Map Unit Composition

Gypsum land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gypsum Land

Setting

Landform: Ridges, hills, plains
Landform position (two-dimensional): Backslope, footslope, shoulder, toeslope
Landform position (three-dimensional): Side slope, crest, nose slope, head slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from gypsum

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Reeves

Percent of map unit:
Ecological site: Salty Bottomland (R042XC033NM)
Hydric soil rating: No

Cottonwood

Percent of map unit:
Ecological site: Salty Bottomland (R042XC033NM)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 14, Sep 12, 2018

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 05989		RA	ED	3	2	4	01	18S	26E	562774	3626466*	1556	72	8	64
RA 03714		RA	CH	4	4	2	08	18S	27E	566212	3625253*	2090	381		
RA 03661		RA	ED	3	2	3	32	17S	27E	565186	3628038*	2344	330	140	190
RA 03664		RA	CH	3	2	3	32	17S	27E	565186	3628038*	2344	400	100	300
RA 02432		RA	ED	2	3	1	12	18S	26E	561764	3625443*	2502	100		

Average Depth to Water: **82 feet**

Minimum Depth: **8 feet**

Maximum Depth: **140 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 564224 **Northing (Y):** 3625900 **Radius:** 3000

***UTM location was derived from PLSS - see Help**

8/7/19 9:21 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

National Flood Hazard Layer FIRMette

FEMA

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainag areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 — Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represe an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/7/2019 at 11:26:39 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX III

FINAL C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Lime Rock Resources	OGRID 277558
Contact Name Michael Barrett	Contact Telephone 575-365-9724
Contact email mbarrett@limerockresources.com	Incident # *(assigned by OCD)*
Contact mailing address 1111 Bagby St Ste 4600 Houston, TX 77002	

Location of Release Source

Latitude 32.7691 Longitude -104.3149

(NAD 83 in decimal degrees to 5 decimal places)

Site Name West Red Lake Unit Water Station #1	Site Type Production Facility
Date Release Discovered 5-18-19	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
B	7	18S	27E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released	Volume Recovered
☒ Produced Water	Volume Released (135 bbls)	Volume Recovered (115 bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: On 5-18-19 at the WRLU Water Station #1 a leak was found due to a split in a 2 7/8" surface IPC injection line due to corrosion. All fluids were contained inside a secondary caliche berm on location. The line was taken out of surface until repairs are made.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Volume exceeded 25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, Chris Jones-Talon LPE to Mike Bratcher, Victoria Venegas, Robert Hamlet-NMOCD, Jim Amos-BLM via email.	

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

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

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

Printed Name: Mike Barrett

Title: Production Superintendent

Signature: Michael Barrett

Date: 8-12-19

email: mbarrett@limerockresources.com

Telephone: 575-365-9724

OCD Only

Received by: _____

Date: _____

State of New Mexico
Oil Conservation Division

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
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: Mike Barrett

Title: Production Superintendent

Signature: Mike Barrett

Date: 8-12-19

email: mbarrett@limerockresources.com

Telephone: 575-365-9724

OCD Only

Received by: _____

Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
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: Mike Barrett
Title: Production Superintendent

Signature: MB
Date: 8-12-19

email: mbarrett@limerockresources.com
Telephone: 575-365-9724

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Mike Barrett Title: Production Superintendent

Signature: _____ Date: 8-12-19

email: mbarrett@limerockresources.com Telephone: 575-365-9724

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

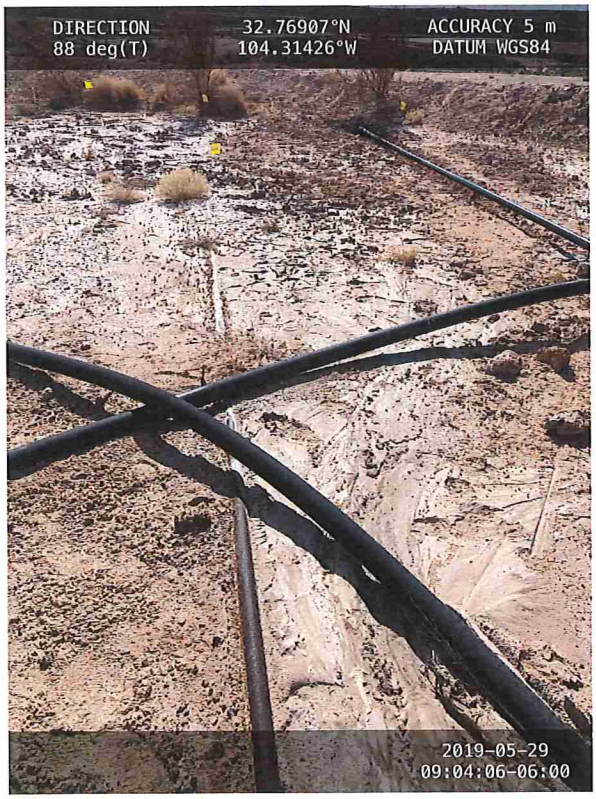
Printed Name: _____ Title: _____

APPENDIX IV

PHOTOGRAPHIC DOCUMENTATION

Spill Area


DIRECTION
40 deg(T)
32.76907°N
104.31431°W
ACCURACY 5 m
DATUM WGS84
2019-05-29
08:50:12-06:00

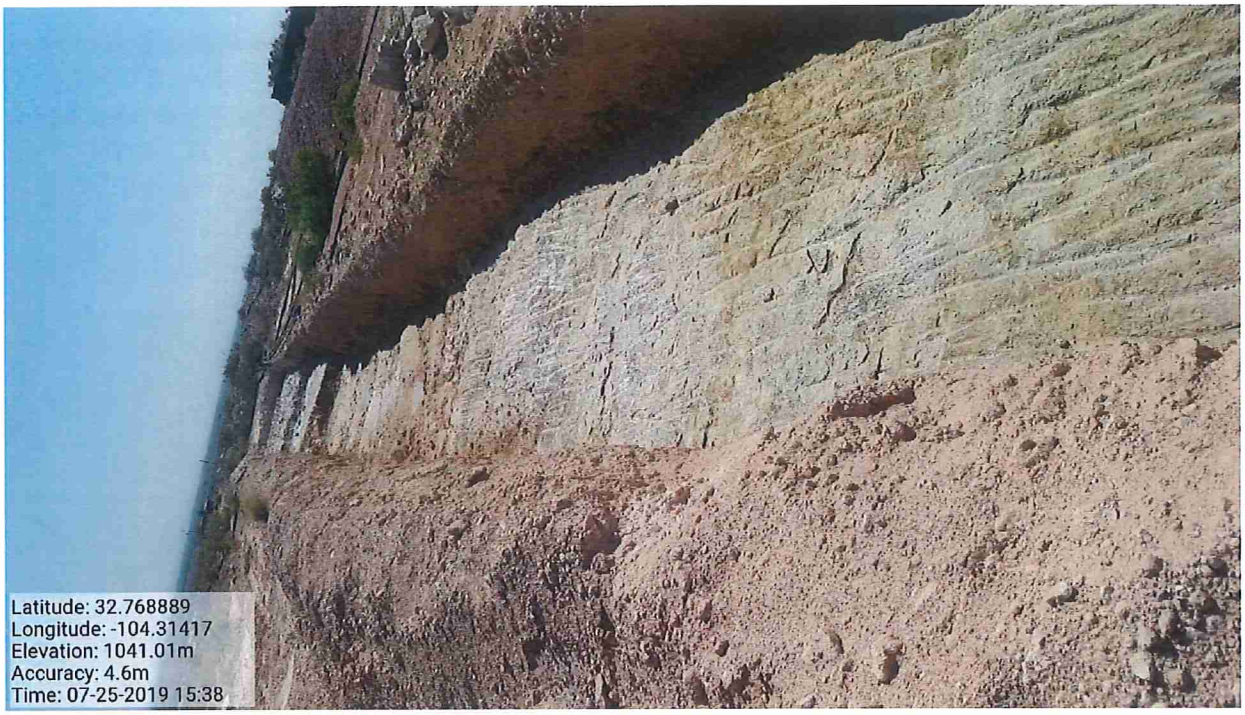

DIRECTION
88 deg(T)
32.76907°N
104.31426°W
ACCURACY 5 m
DATUM WGS84
2019-05-29
09:04:06-06:00


DIRECTION
229 deg(T)
32.76905°N
104.31412°W
ACCURACY 5 m
DATUM WGS84
2019-05-29
09:05:02-06:00


DIRECTION
218 deg(T)
32.76900°N
104.31418°W
ACCURACY 5 m
DATUM WGS84
2019-05-29
09:05:12-06:00


DIRECTION
207 deg(T)
32.76885°N
104.31428°W
ACCURACY 5 m
DATUM WGS84
2019-05-29
09:05:33-06:00

Excavation


Latitude: 32.768889
Longitude: -104.31417
Elevation: 1041.01m
Accuracy: 4.6m
Time: 07-25-2019 15:38

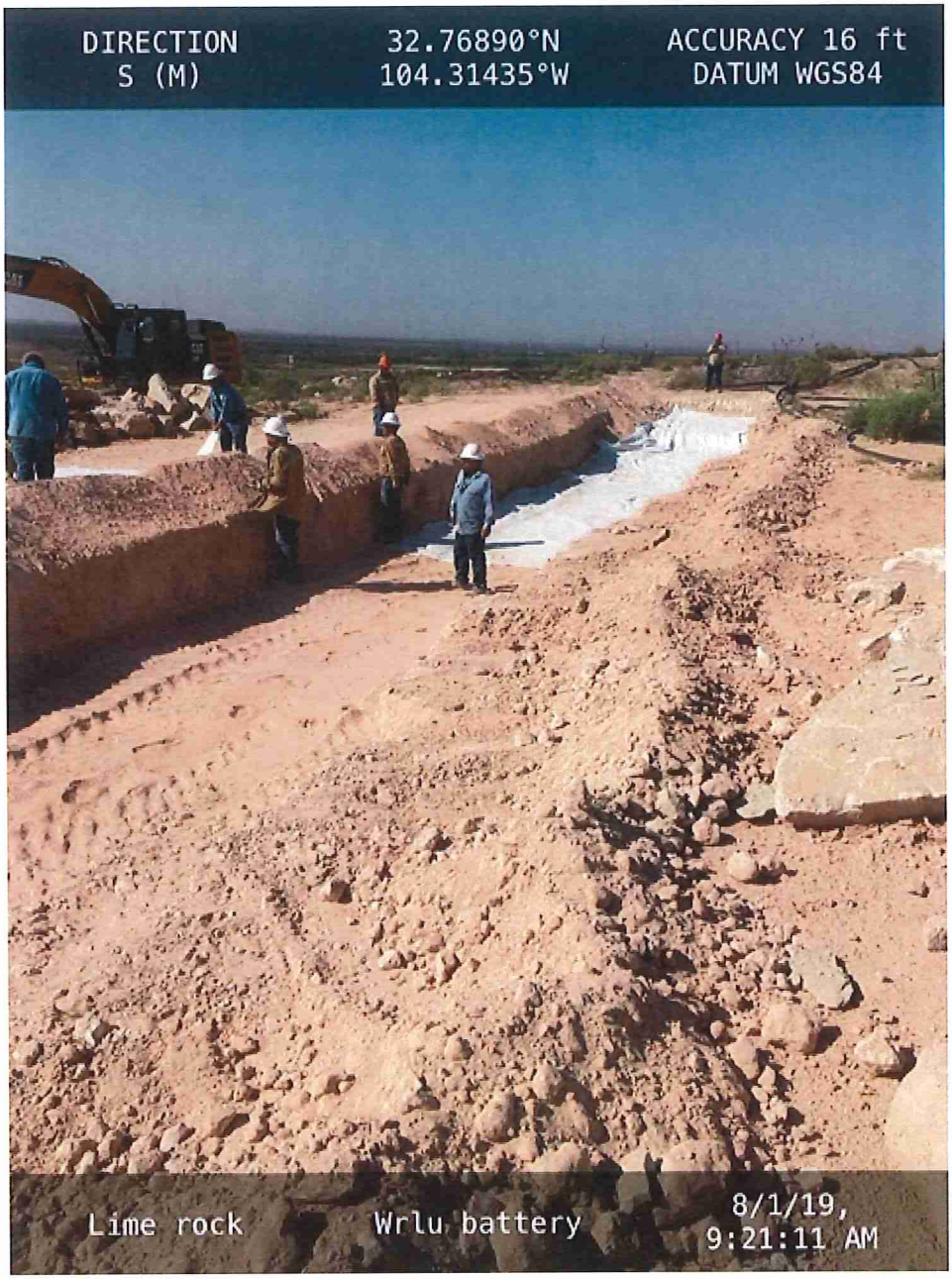

Latitude: 32.768889
Longitude: -104.314171
Elevation: 1041.01m
Accuracy: 4.6m
Time: 07-25-2019 15:39

Hydrovac Pics


Latitude: 32.768925
Longitude: -104.314138
Elevation: 1041.01m
Accuracy: 4.6m
Time: 07-26-2019 14:50

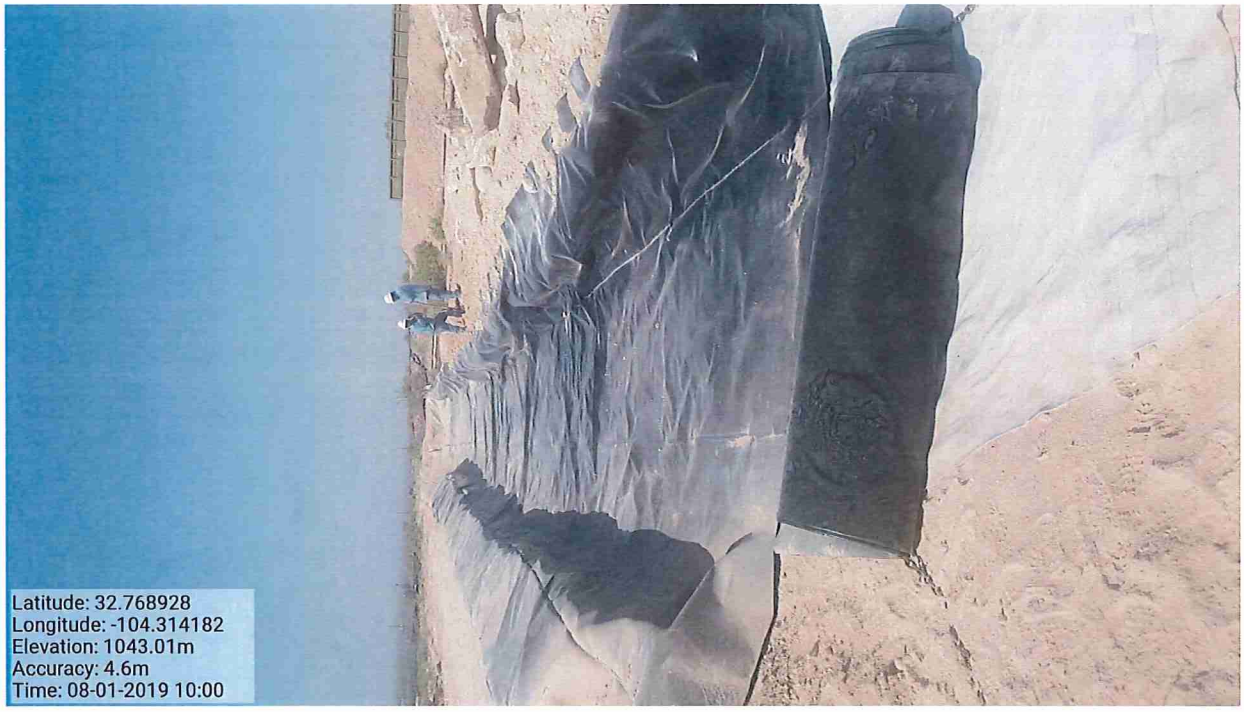

Latitude: 32.768924
Longitude: -104.31415
Elevation: 1039.01m
Accuracy: 4.6m
Time: 07-26-2019 14:49

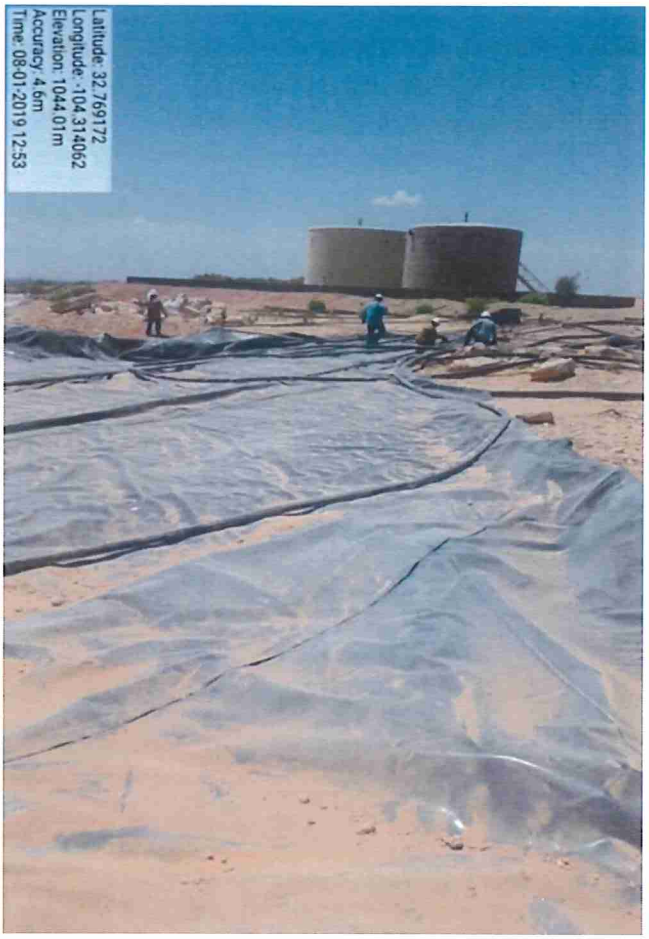
Bentonite Liner Install




DIRECTION
SW (M)
32.76899°N
104.31419°W
ACCURACY 16 ft
DATUM WGS84
Lime rock
Wrlu battery
8/1/19,
9:31:28 AM

40 Mil-Liner Install

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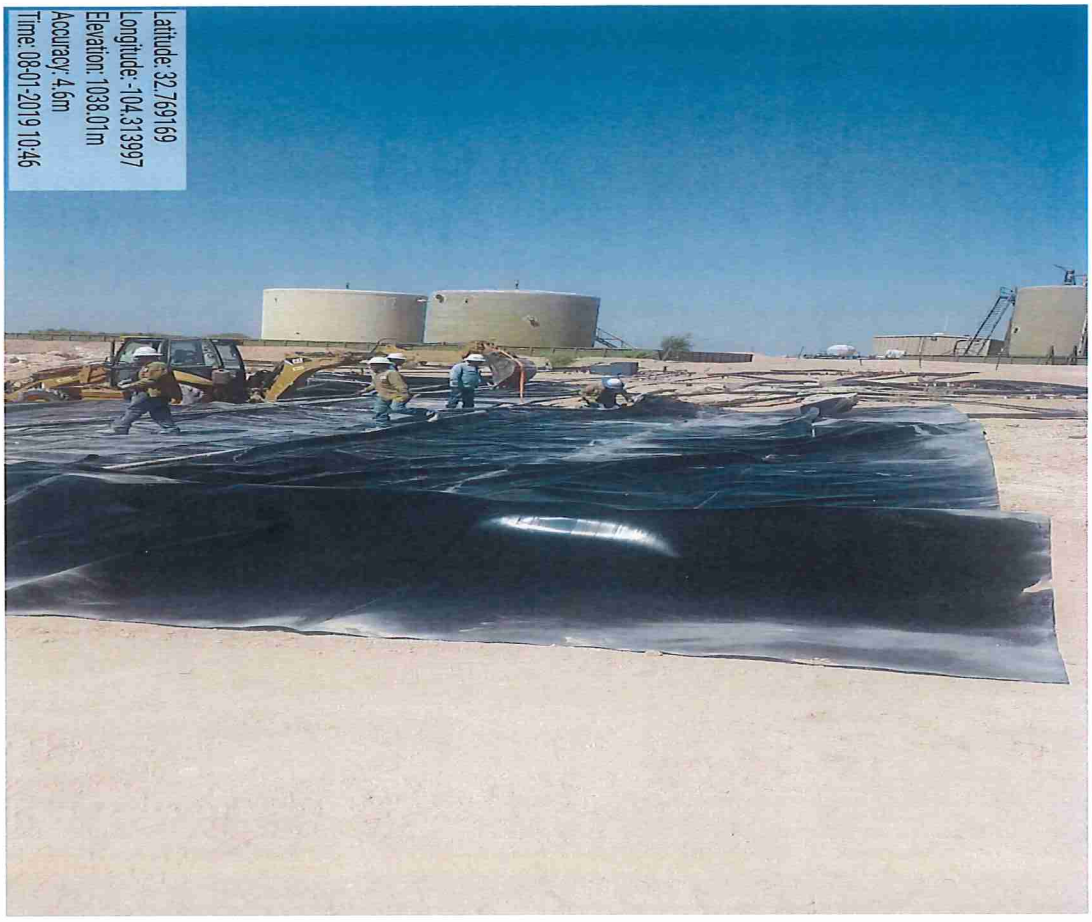
Longitude: -104.314062
Elevation: 1044.01m
Accuracy: 4.6m
Time: 08-01-2019 12:53


Latitude: 32.768969
Longitude: -104.314139
Elevation: 1043.01m
Accuracy: 4.6m
Time: 08-01-2019 12:55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Time: 08-01-2019 10:46


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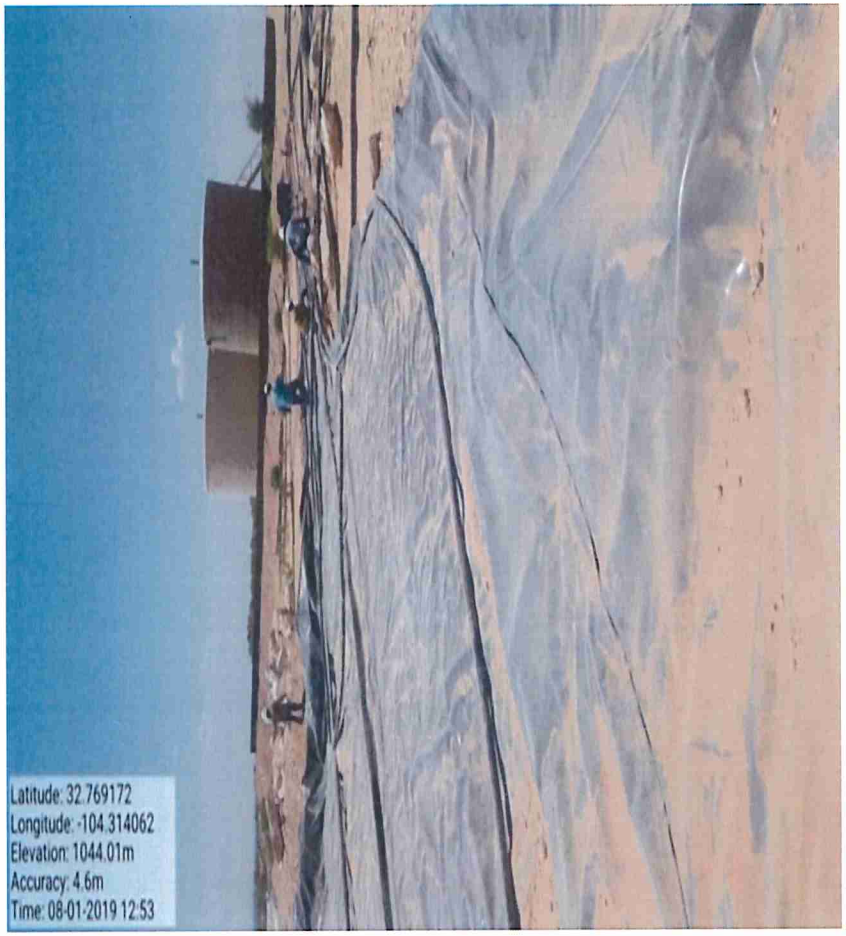
Longitude: -104.314139
Elevation: 1043.01m
Accuracy: 4.6m
Time: 08-01-2019 12:54


Latitude: 32.769172
Longitude: -104.314062
Elevation: 1044.01m
Accuracy: 4.6m
Time: 08-01-2019 12:53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Accuracy: 4.6m
Time: 08-01-2019 12:53

Latitude: 32.769073
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Elevation: 1044.01m
Accuracy: 4.6m
Time: 08-01-2019 10:30

Latitude: 32.769272
Longitude: -104.314055
Elevation: 1042.01m
Accuracy: 4.6m
Time: 08-02-2019 13:58


Latitude: 32.768979
Longitude: -104.313959
Elevation: 1042.01m
Accuracy: 4.6m
Time: 08-02-2019 12:24

Completed


Latitude: 32.769195
Longitude: -104.314019
Elevation: 1047.01m
Accuracy: 4.6m
Time: 08-06-2019 16:19


Latitude: 32.768969
Longitude: -104.313969
Elevation: 1044.01m
Accuracy: 7.6m
Time: 08-02-2019 12:21


Latitude: 32.768571
Longitude: -104.314488
Elevation: 1050.04m
Accuracy: 4.6m
Time: 08-02-2019 12:14

APPENDIX V

LABORATORY DATA

Analytical Report 625910

for

Talon/LPE Co.

Project Manager: Chris Jones

WRLU Water Station #1

701307.120.01

07-JUN-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

Table of Contents

07-JUN-19

Project Manager: **Chris Jones**
Talon/LPE Co.
921 N Bivins St
Amarillo, TX 79107

Reference: XENCO Report No(s): **625910**
WRLU Water Station #1
Project Address:

Chris Jones:

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) 625910. 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. 625910 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 625910

Talon/LPE Co., Amarillo, TX

WRLU Water Station #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-1 0'	S	05-29-19 09:30		625910-001
S-1 1'	S	05-29-19 09:40		625910-002
S-2 0'	S	05-29-19 10:00		625910-003
S-2 1'	S	05-29-19 10:15		625910-004
S-3 0'	S	05-29-19 10:25		625910-005
S-3 1'	S	05-29-19 10:30		625910-006
S-4 0'	S	05-29-19 10:35		625910-007
S-5 0'	S	05-29-19 11:00		625910-008
S-5 1'	S	05-29-19 11:15		625910-009

CASE NARRATIVE

Client Name: Talon/LPE Co.
Project Name: WRLU Water Station #1

Project ID: *701307.120.01*
Work Order Number(s): *625910*

Report Date: *07-JUN-19*
Date Received: *05/30/2019*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3091572 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **S-1 0'** Matrix: Soil Sample Depth:

Lab Sample Id: 625910-001 Date Collected: 05.29.19 09.30 Date Received: 05.30.19 10.58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**14600**	253	43.4	mg/kg	06.04.19 06:27		50

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3090918 Date Prep: 06.01.19 08.00

Prep seq: 7679064

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**8.07**	15.0	7.99	mg/kg	06.01.19 17:48	J	1
Diesel Range Organics (DRO)	C10C28DRO	**33.3**	15.0	8.11	mg/kg	06.01.19 17:48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.01.19 17:48	U	1
Total TPH	PHC635	**41.4**		7.99	mg/kg	06.01.19 17:48		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	06.06.19 22:21	U	1
Toluene	108-88-3	**0.000473**	0.00201	0.000458	mg/kg	06.06.19 22:21	J	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	06.06.19 22:21	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	06.06.19 22:21	U	1
o-Xylene	95-47-6	**0.000412**	0.00201	0.000346	mg/kg	06.06.19 22:21	J	1
Total Xylenes	1330-20-7	**0.000412**		0.000346	mg/kg	06.06.19 22:21	J	
Total BTEX		**0.000885**		0.000346	mg/kg	06.06.19 22:21	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	96	70 - 130	%		

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **S-1 1'** Matrix: Soil Sample Depth:

Lab Sample Id: 625910-002 Date Collected: 05.29.19 09.40 Date Received: 05.30.19 10.58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**823**	25.3	4.34	mg/kg	06.04.19 06:37		5

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3090918 Date Prep: 06.01.19 08.00

Prep seq: 7679064

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.01.19 18:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**9.07**	15.0	8.13	mg/kg	06.01.19 18:08	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.01.19 18:08	U	1
Total TPH	PHC635	**9.07**		8.00	mg/kg	06.01.19 18:08	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	06.06.19 22:40	U	1
Toluene	108-88-3	**0.000497**	0.00199	0.000453	mg/kg	06.06.19 22:40	J	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	06.06.19 22:40	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	06.06.19 22:40	U	1
o-Xylene	95-47-6	**0.000358**	0.00199	0.000342	mg/kg	06.06.19 22:40	J	1
Total Xylenes	1330-20-7	**0.000358**		0.000342	mg/kg	06.06.19 22:40	J	
Total BTEX		**0.000855**		0.000342	mg/kg	06.06.19 22:40	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	102	70 - 130	%		

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **S-2 0'** Matrix: Soil Sample Depth:

Lab Sample Id: 625910-003 Date Collected: 05.29.19 10.00 Date Received: 05.30.19 10.58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**21800**	253	43.4	mg/kg	06.04.19 06:48		50

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3090918 Date Prep: 06.01.19 08.00

Prep seq: 7679064

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	06.01.19 18:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**38.1**	15.0	8.12	mg/kg	06.01.19 18:28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	06.01.19 18:28	U	1
Total TPH	PHC635	**38.1**		7.99	mg/kg	06.01.19 18:28		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	06.06.19 22:59	U	1
Toluene	108-88-3	**0.000468**	0.00199	0.000454	mg/kg	06.06.19 22:59	J	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	06.06.19 22:59	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	06.06.19 22:59	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	06.06.19 22:59	U	1
Total Xylenes	1330-20-7	<0.000343		0.000343	mg/kg	06.06.19 22:59	U	
Total BTEX		**0.000468**		0.000343	mg/kg	06.06.19 22:59	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **S-2 1'** Matrix: Soil Sample Depth:

Lab Sample Id: 625910-004 Date Collected: 05.29.19 10.15 Date Received: 05.30.19 10.58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**6390**	49.7	8.53	mg/kg	06.04.19 06:58		10

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3090918 Date Prep: 06.01.19 08.00

Prep seq: 7679064

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**14.1**	15.0	7.99	mg/kg	06.01.19 18:47	J	1
Diesel Range Organics (DRO)	C10C28DRO	**26.3**	15.0	8.12	mg/kg	06.01.19 18:47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	06.01.19 18:47	U	1
Total TPH	PHC635	**40.4**		7.99	mg/kg	06.01.19 18:47		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	06.06.19 23:18	U	1
Toluene	108-88-3	**0.000606**	0.00199	0.000453	mg/kg	06.06.19 23:18	J	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	06.06.19 23:18	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	06.06.19 23:18	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	06.06.19 23:18	U	1
Total Xylenes	1330-20-7	<0.000342		0.000342	mg/kg	06.06.19 23:18	U	
Total BTEX		**0.000606**		0.000342	mg/kg	06.06.19 23:18	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	101	70 - 130	%		

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **S-3 0'** Matrix: Soil Sample Depth:

Lab Sample Id: 625910-005 Date Collected: 05.29.19 10.25 Date Received: 05.30.19 10.58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**23800**	248	42.5	mg/kg	06.04.19 07:40		50

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3090918 Date Prep: 06.01.19 08.00

Prep seq: 7679064

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	06.01.19 19:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	**16.1**	15.0	8.10	mg/kg	06.01.19 19:07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	06.01.19 19:07	U	1
Total TPH	PHC635	**16.1**		7.98	mg/kg	06.01.19 19:07		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	06.07.19 00:32	U	1
Toluene	108-88-3	**0.000665**	0.00202	0.000459	mg/kg	06.07.19 00:32	J	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	06.07.19 00:32	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	06.07.19 00:32	U	1
o-Xylene	95-47-6	**0.000484**	0.00202	0.000347	mg/kg	06.07.19 00:32	J	1
Total Xylenes	1330-20-7	**0.000484**		0.000347	mg/kg	06.07.19 00:32	J	
Total BTEX		**0.00115**		0.000347	mg/kg	06.07.19 00:32	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	70 - 130	%		
4-Bromofluorobenzene	103	70 - 130	%		

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **S-3 1'** Matrix: Soil Sample Depth:

Lab Sample Id: 625910-006 Date Collected: 05.29.19 10.30 Date Received: 05.30.19 10.58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**5490**	100	17.2	mg/kg	06.04.19 07:50		20

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3090918 Date Prep: 06.01.19 08.00

Prep seq: 7679064

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**1800**	15.0	7.99	mg/kg	06.01.19 19:27		1
Diesel Range Organics (DRO)	C10C28DRO	**2440**	15.0	8.11	mg/kg	06.01.19 19:27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**12.5**	15.0	8.11	mg/kg	06.01.19 19:27	J	1
Total TPH	PHC635	**4250**		7.99	mg/kg	06.01.19 19:27		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	126	70 - 135	%		
o-Terphenyl	106	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	06.07.19 00:51	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	06.07.19 00:51	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	06.07.19 00:51	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	06.07.19 00:51	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	06.07.19 00:51	U	1
Total Xylenes	1330-20-7	<0.000343		0.000343	mg/kg	06.07.19 00:51	U	
Total BTEX		<0.000343		0.000343	mg/kg	06.07.19 00:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	93	70 - 130	%		

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **S-4 0'** Matrix: Soil Sample Depth:

Lab Sample Id: 625910-007 Date Collected: 05.29.19 10.35 Date Received: 05.30.19 10.58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**39800**	248	42.6	mg/kg	06.04.19 08:22		50

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3090918 Date Prep: 06.01.19 08.00

Prep seq: 7679064

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.1**	15.0	7.99	mg/kg	06.01.19 19:47		1
Diesel Range Organics (DRO)	C10C28DRO	**54.9**	15.0	8.11	mg/kg	06.01.19 19:47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	06.01.19 19:47	U	1
Total TPH	PHC635	**71.0**		7.99	mg/kg	06.01.19 19:47		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.00169**	0.00200	0.000386	mg/kg	06.07.19 01:10	J	1
Toluene	108-88-3	**0.234**	0.00200	0.000457	mg/kg	06.07.19 01:10		1
Ethylbenzene	100-41-4	**0.00535**	0.00200	0.000566	mg/kg	06.07.19 01:10		1
m,p-Xylenes	179601-23-1	**0.00990**	0.00401	0.00102	mg/kg	06.07.19 01:10		1
o-Xylene	95-47-6	**0.00374**	0.00200	0.000345	mg/kg	06.07.19 01:10		1
Total Xylenes	1330-20-7	**0.0136**		0.000345	mg/kg	06.07.19 01:10		
Total BTEX		**0.255**		0.000345	mg/kg	06.07.19 01:10		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	96	70 - 130	%		

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **S-5 0'** Matrix: Soil Sample Depth:

Lab Sample Id: 625910-008 Date Collected: 05.29.19 11.00 Date Received: 05.30.19 10.58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**41500**	250	42.8	mg/kg	06.04.19 08:32		50

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3090918 Date Prep: 06.01.19 08.00

Prep seq: 7679064

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	06.01.19 20:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	**15.7**	14.9	8.10	mg/kg	06.01.19 20:06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	14.9	8.10	mg/kg	06.01.19 20:06	U	1
Total TPH	PHC635	**15.7**		7.97	mg/kg	06.01.19 20:06		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	06.07.19 01:29	U	1
Toluene	108-88-3	**0.00118**	0.00200	0.000456	mg/kg	06.07.19 01:29	J	1
Ethylbenzene	100-41-4	**0.000820**	0.00200	0.000565	mg/kg	06.07.19 01:29	J	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	06.07.19 01:29	U	1
o-Xylene	95-47-6	**0.000740**	0.00200	0.000344	mg/kg	06.07.19 01:29	J	1
Total Xylenes	1330-20-7	**0.000740**		0.000344	mg/kg	06.07.19 01:29	J	
Total BTEX		**0.00274**		0.000344	mg/kg	06.07.19 01:29		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	106	70 - 130	%		

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **S-5 1'** Matrix: Soil Sample Depth:

Lab Sample Id: 625910-009 Date Collected: 05.29.19 11.15 Date Received: 05.30.19 10.58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**4530**	49.7	8.53	mg/kg	06.04.19 11:22		10

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3091576 Date Prep: 06.04.19 17.00

Prep seq: 7679449

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	**14.6**	15.0	7.99	mg/kg	06.07.19 08:51	J	1
Diesel Range Organics (DRO)	C10C28DRO	**853**	15.0	8.11	mg/kg	06.07.19 08:51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**162**	15.0	8.11	mg/kg	06.07.19 08:51		1
Total TPH	PHC635	**1030**		7.99	mg/kg	06.07.19 08:51		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	78	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	**0.000699**	0.00200	0.000384	mg/kg	06.07.19 01:48	J	1
Toluene	108-88-3	**0.000739**	0.00200	0.000455	mg/kg	06.07.19 01:48	J	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	06.07.19 01:48	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	06.07.19 01:48	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	06.07.19 01:48	U	1
Total Xylenes	1330-20-7	<0.000344		0.000344	mg/kg	06.07.19 01:48	U	
Total BTEX		**0.00144**		0.000344	mg/kg	06.07.19 01:48	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	90	70 - 130	%		

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **7679064-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7679064-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3090918 Date Prep: 06.01.19 08.00

Prep seq: 7679064

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.01.19 12:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.01.19 12:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.01.19 12:11	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	06.01.19 12:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	96	70 - 135	%		

Sample Id: **7679076-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7679076-1-BLK Date Collected: Date Received:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3091025 Date Prep: 06.03.19 15.40

Prep seq: 7679076

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	06.04.19 04:12	U	1

Certificate of Analytical Results
625910
Talon/LPE Co., Amarillo, TX
WRLU Water Station #1

Sample Id: **7679449-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7679449-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3091576 Date Prep: 06.04.19 17.00

Prep seq: 7679449

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	06.07.19 00:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	06.07.19 00:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	06.07.19 00:38	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	06.07.19 00:38	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Sample Id: **7679454-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7679454-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: SCM % Moist: Tech: SCM

Seq Number: 3091572 Date Prep: 06.06.19 15.50

Prep seq: 7679454

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	06.06.19 20:06	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	06.06.19 20:06	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	06.06.19 20:06	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	06.06.19 20:06	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	06.06.19 20:06	U	1
Total Xylenes	1330-20-7	<0.000346		0.000346	mg/kg	06.06.19 20:06	U	
Total BTEX		<0.000346		0.000346	mg/kg	06.06.19 20:06	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	70 - 130	%		
4-Bromofluorobenzene	84	70 - 130	%		

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

Form 2 - Surrogate Recoveries

Project Name: WRLU Water Station #1

Work Orders : 625910, **Project ID:** 701307.120.01

Lab Batch #: 3091572 **Sample:** 7679454-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/19 18:26

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	70-130	
4-Bromofluorobenzene	0.0290	0.0300	97	70-130	

Lab Batch #: 3091572 **Sample:** 7679454-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/19 18:47

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

Lab Batch #: 3091572 **Sample:** 626041-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/19 19:07

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0301	0.0300	100	70-130	

Lab Batch #: 3091572 **Sample:** 626041-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/19 19:27

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0244	0.0300	81	70-130	

Lab Batch #: 3091572 **Sample:** 7679454-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/19 20:06

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	70-130	
4-Bromofluorobenzene	0.0253	0.0300	84	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: WRLU Water Station #1

Work Orders : 625910,

Project ID: 701307.120.01

Lab Batch #: 3090918 **Sample:** 7679064-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/01/19 12:11

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	100	96	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 3090918 **Sample:** 7679064-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/01/19 12:31

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	51.7	50.0	103	70-135	

Lab Batch #: 3090918 **Sample:** 7679064-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/01/19 12:50

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	52.3	50.0	105	70-135	

Lab Batch #: 3090918 **Sample:** 625765-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/19 13:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.6	128	70-135	
o-Terphenyl	49.7	49.8	100	70-135	

Lab Batch #: 3090918 **Sample:** 625765-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/19 13:49

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.8	113	70-135	
o-Terphenyl	47.4	49.9	95	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: WRLU Water Station #1

Work Orders : 625910, **Project ID:** 701307.120.01

Lab Batch #: 3091576 **Sample:** 7679449-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/07/19 00:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 3091576 **Sample:** 7679449-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/07/19 01:02

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	100	95	70-135	
o-Terphenyl	49.1	50.0	98	70-135	

Lab Batch #: 3091576 **Sample:** 7679449-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/07/19 01:27

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.4	100	91	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

Lab Batch #: 3091576 **Sample:** 625896-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/07/19 02:16

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	99.9	85	70-135	
o-Terphenyl	39.8	50.0	80	70-135	

Lab Batch #: 3091576 **Sample:** 625896-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/07/19 02:40

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.0	99.8	78	70-135	
o-Terphenyl	39.6	49.9	79	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: WRLU Water Station #1

Work Order #: 625910 **Project ID:** 701307.120.01

Analyst: SCM **Date Prepared:** 06/06/2019 **Date Analyzed:** 06/06/2019

Lab Batch ID: 3091572 **Sample:** 7679454-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000384	0.0998	0.103	103	0.101	0.107	106	4	70-130	35	
Toluene	<0.000455	0.0998	0.102	102	0.101	0.105	104	3	70-130	35	
Ethylbenzene	<0.000564	0.0998	0.112	112	0.101	0.115	114	3	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.227	114	0.201	0.234	116	3	70-130	35	
o-Xylene	<0.000344	0.0998	0.109	109	0.101	0.114	113	4	70-130	35	

Analyst: CHE **Date Prepared:** 06/03/2019 **Date Analyzed:** 06/04/2019

Lab Batch ID: 3091025 **Sample:** 7679076-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Chloride by EPA 300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	245	98	250	245	98	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: WRLU Water Station #1

Work Order #: 625910 **Project ID:** 701307.120.01

Analyst: ARM **Date Prepared:** 06/01/2019 **Date Analyzed:** 06/01/2019

Lab Batch ID: 3090918 **Sample:** 7679064-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1170	117	1000	1200	120	3	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1140	114	1000	1170	117	3	70-135	20	

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Analyst: ARM **Date Prepared:** 06/04/2019 **Date Analyzed:** 06/07/2019

Lab Batch ID: 3091576 **Sample:** 7679449-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	916	92	1000	899	90	2	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	918	92	1000	889	89	3	70-135	20	

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: WRLU Water Station #1

Work Order # : 625910 **Project ID:** 701307.120.01

Lab Batch ID: 3091572 **QC- Sample ID:** 626041-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/06/2019 **Date Prepared:** 06/06/2019 **Analyst:** SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.000466	0.100	0.0747	74	0.101	0.0675	66	10	70-130	35	X
Toluene	0.000913	0.100	0.0583	57	0.101	0.0572	56	2	70-130	35	X
Ethylbenzene	<0.000566	0.100	0.0496	50	0.101	0.0493	49	1	70-130	35	X
m,p-Xylenes	<0.00102	0.200	0.0970	49	0.202	0.0947	47	2	70-130	35	X
o-Xylene	0.000397	0.100	0.0478	47	0.101	0.0477	47	0	70-130	35	X

Lab Batch ID: 3091025 **QC- Sample ID:** 626108-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/04/2019 **Date Prepared:** 06/03/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	418	250	671	101	250	671	101	0	90-110	20	

Lab Batch ID: 3091025 **QC- Sample ID:** 626110-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/04/2019 **Date Prepared:** 06/03/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	4.68	250	264	104	250	263	103	0	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: WRLU Water Station #1

Work Order # : 625910 **Project ID:** 701307.120.01

Lab Batch ID: 3090918 **QC- Sample ID:** 625765-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/01/2019 **Date Prepared:** 06/01/2019 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	835	996	1740	91	998	1720	89	1	70-135	20	
Diesel Range Organics (DRO)	1200	996	2070	87	998	2050	85	1	70-135	20	

Lab Batch ID: 3091576 **QC- Sample ID:** 625896-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/07/2019 **Date Prepared:** 06/04/2019 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	13.5	999	816	80	998	788	78	3	70-135	20	
Diesel Range Organics (DRO)	<8.12	999	831	83	998	810	81	3	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Chain of Custody

Work Order No: 625910

XENCO LABORATORIES

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

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Project Manager:	Chris Jones	Bill to: (if different)	
Company Name:	Talon LPE	Company Name:	
Address:	408 W Texas Ave	Address:	
City, State ZIP:	Artesia, NM 88210	City, State ZIP:	
Phone:	575-746-8768 Email:		

Work Order Comments

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

Project Name:	WRLU Water Station #1	Turn Around	
Project Number:	701307.120.01	Routine	☒
P.O. Number:	701307.120.01	Rush:	
Sampler's Name:	Brandon Sinclair	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.5 | 0.3	Thermometer ID:	128
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH EXT	BTEX	Total Chlorides
S-1 0'	soil	5/29/19	0930		1	✓	✓	✓
S-1 1'			0940					
S-2 0'			1000					
S-2 1'			1015					
S-3 0'			1025					
S-3 1'			1035					
S-4 0'			1050					
S-5 0'			1100					
S-5 1'			1115					

Work Order Notes

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

Sample Comments

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Brandon Sinclair	Carlos	5/29/19 13:05	2			5/30/19 1058
3				4			
5				6			

Revised Date 051418 Rev. 2018.1

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Talon/LPE Co.

Date/ Time Received: 05/30/2019 10:58:00 AM

Work Order #: 625910

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: 05/30/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/31/2019
Jessica Kramer