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Soil Assessment and Remediation Work Plan

West Red Lake Unit #13
API # 30-015-00804
Talon Project No. 701307.118.01

Prepared For:

Lime Rock Resources II-A, L.P.
1111 Bagby St Suite 4600
Houston, TX 77002

Prepared By:

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

February 18, 2019

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

Subject: **Soil Assessment and Remediation Work Plan**
 West Red Lake Unit #13
 API # 30-015-00804

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 soil assessment and proposed remediation activities consist of the following.

Site Information

The Compton 8 G Battery is located approximately 11 miles SE of Artesia, New Mexico. The legal location for this release is Unit Letter A, Section 7, Township 18 South and Range 27 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.7686577 North and -104.3122253 West. A site plan is presented in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of weathered Gypsum. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Paleozoic Age sedimentary deposits and comprised of the Guadeloupien Artesia Group, Tansil and Yates formations. These are made up of silty soils underlain by hard, weathered gypsum rock and caliches. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates that the average depth to groundwater in the area is 82-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater data.

Therefore the ranking for this site is a **10** based on the following:

| | |
|--------------------------------|---------|
| Depth to groundwater | 50-100' |
| Wellhead Protection Area | >1000' |
| Distance to surface water body | >1000' |

Based upon the site ranking of 10, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 2,500 mg/kg for TPH and 10,000 mg/kg for total chlorides.

Incident Description and Initial Remedial Actions

On November 19, 2018, a 2 and 7/8" steel surface injection line split due to corrosion and high pressure resulting in a release of 150 bbls of produced water. A vac truck was immediately dispatched and was able to recover 100 bbls of fluids. The line was isolated to prevent any further release and repairs were made. A site plan is presented in [Appendix I](#) which illustrates the impacted area. The initial C-141 is provided in [Appendix III](#).

On November 20, 2018, Talon personnel mobilized to the site to carry out an initial site assessment. Soil samples were collected utilizing a hand auger to depths at which refusal (rock) was encountered. Refusal was encountered between the surface and 2.0-foot BGS at all eleven (11) sample locations.

See [Appendix IV](#) for a complete report of laboratory results.

| Sample ID | Depth (feet) | BTEX (mg/kg) | Chlorides (mg/kg) | TPH GRO (mg/kg) | TPH DRO (mg/kg) | TPH EXT (mg/kg) |
|-----------|--------------|--------------|-------------------|-----------------|-----------------|-----------------|
| BG-1 | 0 | -- | 48 | -- | -- | -- |
| | 0.5 | -- | 32 | -- | -- | -- |
| | | | | | | |
| BG-2 | 1-R | -- | 80 | -- | -- | -- |
| | | | | | | |
| S-1 | 0 | -- | 13800 | -- | -- | -- |
| | 1-R | -- | 496 | -- | -- | -- |
| | | | | | | |
| S-2 | 0 | -- | 12400 | -- | -- | -- |
| | 0.5-R | -- | 9000 | -- | -- | -- |
| | | | | | | |
| S-3 | 0 | -- | 16000 | -- | -- | -- |
| | 0.5-R | -- | 12400 | -- | -- | -- |
| | | | | | | |
| S-4 | 0 | -- | 20000 | -- | -- | -- |
| | 0.5-R | -- | 384 | -- | -- | -- |
| | | | | | | |
| S-5 | 0-R | -- | 320 | -- | -- | -- |
| | | | | | | |
| S-6 | 0 | -- | 2400 | -- | -- | -- |
| | 1-R | -- | 5360 | -- | -- | -- |
| | | | | | | |
| S-7 | 0 | -- | 96 | -- | -- | -- |
| | 1 | -- | 384 | -- | -- | -- |
| | 2-R | -- | 592 | -- | -- | -- |
| | | | | | | |
| S-8 | 0-R | -- | 112 | -- | -- | -- |

| Sample ID | Depth (feet) | BTEX (mg/kg) | Chlorides (mg/kg) | TPH GRO (mg/kg) | TPH DRO (mg/kg) | TPH EXT (mg/kg) |
|-----------|--------------|--------------|-------------------|-----------------|-----------------|-----------------|
| S-9 | 0 | -- | 4000 | -- | -- | -- |
| | 0.5-R | -- | 3520 | -- | -- | -- |
| | | | | | | |
| S-10 | 0-R | -- | 12400 | -- | -- | -- |
| | | | | | | |
| S-11 | 0 | -- | 7800 | -- | -- | -- |
| | 1-R | -- | 528 | -- | -- | -- |

R-Hard Rock Refusal; --Analyte Not Tested

Proposed Remedial Actions:

- The impacted area on location in the vicinity of S-1 and S-3 will be excavated to a depth of 1.0-foot with confirmation samples being obtained at sample location S-3.
- The impacted material on the lease road will be excavated to 0.5-feet deep at S-4 and S-10 with confirmation samples collected at S-10.
- All of the excavated material will be hauled to Lea Land, LLC, an NMOCD approved solid waste disposal facility.
- The excavated areas will be backfilled with new caliche, machine compacted and contoured to match the surrounding location.
- Due to the steep topography and rocky terrain in the remainder of the flow path, additional excavation of soil is not possible.
- A final closure report documenting the remedial actions and a Final C-141 will be provided to the NMOCD District II Artesia Office.

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 Site Plan
- Appendix II Groundwater Data & Soil Survey
- Appendix III Initial C-141
- Appendix IV Laboratory Results

APPENDIX I

SITE PLAN

WRLU 13

Lime rock Resources
Eddy County, NM
API- 30-015-00804

WRLU 13 Source

Lime Rock WRLU 13

Lime Rock WRLU 13

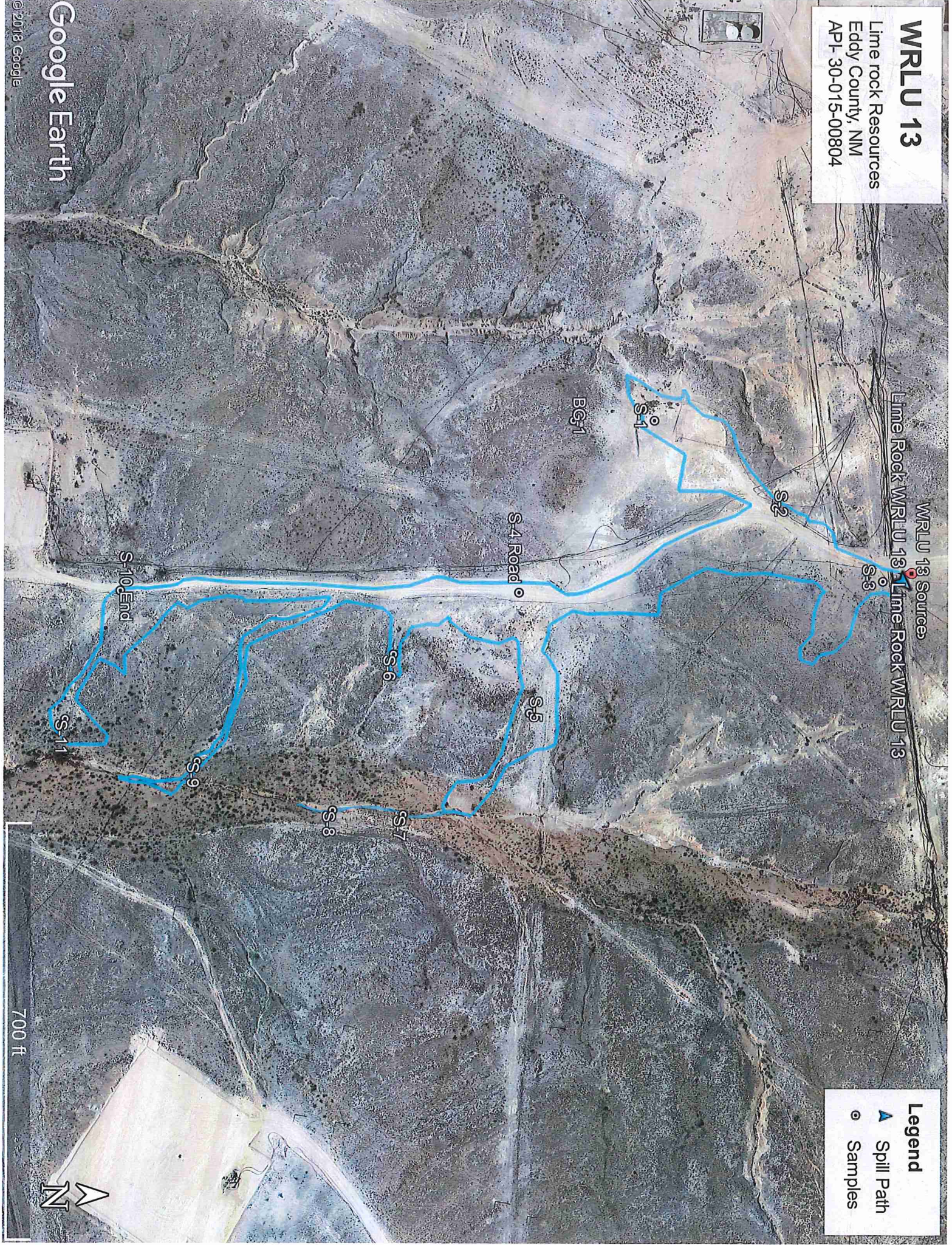
Legend

- ▲ Spill Path
- Samples

Google Earth

© 2018 Google

700 ft



APPENDIX II

GROUNDWATER DATA

SOIL SURVEY



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 | DepthWell | DepthWater | Water Column |
|--------------------------|------|---------------|--------|------|------|-----|-----|-----|-----|--------|----------|----------|-----------|------------|--------------|
| RA 03714 | | RA | CH | 4 | 4 | 2 | 08 | 18S | 27E | 566212 | 3625253* | 1780 | 381 | | |
| RA 05989 | | RA | ED | 3 | 2 | 4 | 01 | 18S | 26E | 562774 | 3626466* | 1870 | 72 | 8 | 64 |
| RA 03661 | | RA | ED | 3 | 2 | 3 | 32 | 17S | 27E | 565186 | 3628038* | 2388 | 330 | 140 | 190 |
| RA 03664 | | RA | CH | 3 | 2 | 3 | 32 | 17S | 27E | 565186 | 3628038* | 2388 | 400 | 100 | 300 |
| RA 02432 | | RA | ED | 2 | 3 | 1 | 12 | 18S | 26E | 561764 | 3625443* | 2755 | 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): 564502

Northing (Y): 3625750

Radius: 3000

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2/7/19 10:08 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

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

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 |
| 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 32.7686577 Longitude -104.3122253
(NAD 83 in decimal degrees to 5 decimal places)

| | |
|----------------------------------|--------------------------|
| Site Name West Red Lake Unit #13 | Site Type Injection Well |
| Date Release Discovered 11-19-18 | API# 30-015-00804 |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| A | 07 | 18S | 27E | Eddy |

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: Richard Gatewood)

Nature and Volume of Release

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

| | | |
|--|--|---|
| <input type="checkbox"/> Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls) 150 | Volume Recovered (bbls) 100 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| <input type="checkbox"/> Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| <input type="checkbox"/> Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release

A 2 and 7/8 inch steel surface injection line split due to corrosion and pressure.


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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | If YES, for what reason(s) does the responsible party consider this a major release? This spill is greater than 25 bbls |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, David Adkins with Talon LPE notified Mike Bratcher with the NMOCD of the release. | |

Initial Response

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

| | |
|--|---|
| <input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately. | |
| If all the actions described above have <u>not</u> been undertaken, explain why: | |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation. | |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. | |
| Printed Name: <u>Michael Barrett</u> | Title: <u>Production Superintendent</u> |
| Signature:  | Date: 11-28-18 |
| email: mbarrett@limerockresources.com | Telephone: 575-365-9724 |
| OCD Only Received by: _____ Date: _____ | |

APPENDIX IV

LABORATORY RESULTS



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 29, 2018

CHRIS JONES

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: WRLU 13

Enclosed are the results of analyses for samples received by the laboratory on 11/20/18 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

| | |
|------------------|------------------------------|
| Method EPA 552.2 | Haloacetic Acids (HAA-5) |
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3) |

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 CHRIS JONES
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

 Received: 11/20/2018
 Reported: 11/29/2018
 Project Name: WRLU 13
 Project Number: NONE GIVEN
 Project Location: LIMEROCK

 Sampling Date: 11/20/2018
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: BG -1 0' (H803403-01)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 48.0 | 16.0 | 11/28/2018 | ND | 400 | 100 | 400 | 0.00 | |

Sample ID: BG -1 6" - R (H803403-02)

| Chloride, SM4500Cl-B | | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|--------------|-----------------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 32.0 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

Sample ID: BG -2 1' - R (H803403-03)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 80.0 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

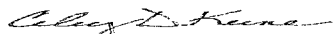
Sample ID: S -1 0' (H803403-04)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 13800 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | |

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 CHRIS JONES
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

 Received: 11/20/2018
 Reported: 11/29/2018
 Project Name: WRLU 13
 Project Number: NONE GIVEN
 Project Location: LIMEROCK

 Sampling Date: 11/20/2018
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: S -1 1' - R (H803403-05)

| Chloride, SM4500Cl-B | | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|--------------|-----------------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 496 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

Sample ID: S -2 0' (H803403-06)

| Chloride, SM4500Cl-B | | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|--------------|-----------------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 12400 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

Sample ID: S -2 6" - R (H803403-07)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 9000 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

Sample ID: S -3 0' (H803403-08)

| Chloride, SM4500Cl-B | | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|--------------|-----------------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 16000 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

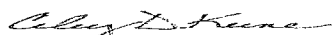
Sample ID: S -3 6" - R (H803403-09)

| Chloride, SM4500Cl-B | | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|--------------|-----------------|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 12400 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 CHRIS JONES
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

 Received: 11/20/2018
 Reported: 11/29/2018
 Project Name: WRLU 13
 Project Number: NONE GIVEN
 Project Location: LIMEROCK

 Sampling Date: 11/20/2018
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: S -4 0' (H803403-10)

| Chloride, SM4500Cl-B | | | mg/kg | | | | | | | | Analyzed By: AC | | |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|-----------------|--|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | | | | |
| Chloride | 20000 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | | | | |

Sample ID: S -4 6" - R (H803403-11)

| Chloride, SM4500Cl-B | | | mg/kg Analyzed By: AC | | | | | | | |
|----------------------|--------|-----------------|-----------------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 384 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

Sample ID: S -5 0' - R (H803403-12)

| Chloride, SM4500Cl-B | | | mg/kg | | | | | | | |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|--|
| | | | Analyzed By: AC | | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 320 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

Sample ID: S -6 0' (H803403-13)

| Chloride, SM4500Cl-B | | | mg/kg | | | | | | | |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|--|
| | | | Analyzed By: AC | | | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 2400 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

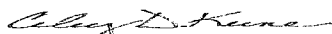
Sample ID: S -6 1' - R (H803403-14)

| Chloride, SM4500Cl-B | | | mg/kg | | | | | | | | Analyzed By: AC | |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|-----------------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | | | |
| Chloride | 5360 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | | | |

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 CHRIS JONES
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

 Received: 11/20/2018
 Reported: 11/29/2018
 Project Name: WRLU 13
 Project Number: NONE GIVEN
 Project Location: LIMEROCK

 Sampling Date: 11/20/2018
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: S -7 0' (H803403-15)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 96.0 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | |

Sample ID: S -7 1' (H803403-16)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 384 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | |

Sample ID: S -7 2' - R (H803403-17)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 592 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

Sample ID: S -8 0' - R (H803403-18)

| Chloride, SM4500Cl-B | | | mg/kg Analyzed By: AC | | | | | | | |
|----------------------|--------|-----------------|-----------------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | 112 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | | |

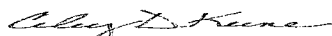
Sample ID: S -9 0' (H803403-19)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 4000 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | |

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 CHRIS JONES
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

 Received: 11/20/2018
 Reported: 11/29/2018
 Project Name: WRLU 13
 Project Number: NONE GIVEN
 Project Location: LIMEROCK

 Sampling Date: 11/20/2018
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: S -9 6" - R (H803403-20)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 3520 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | |

Sample ID: S -10 0' - R (H803403-21)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 12400 | 16.0 | 11/28/2018 | ND | 416 | 104 | 400 | 0.00 | |

Sample ID: S -11 0' (H803403-22)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 7800 | 16.0 | 11/28/2018 | ND | 400 | 100 | 400 | 0.00 | QM-07 |

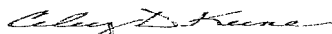
Sample ID: S -11 1' - R (H803403-23)

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 528 | 16.0 | 11/28/2018 | ND | 400 | 100 | 400 | 0.00 | |

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Celey D. Keene, Lab Director/Quality Manager


Notes and Definitions

| | |
|-------|--|
| QM-07 | The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery. |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| RPD | Relative Percent Difference |
| ** | Samples not received at proper temperature of 6°C or below. |
| *** | Insufficient time to reach temperature. |
| - | Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report |

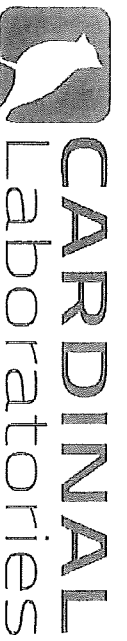
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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Maryland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

ANALYSIS REQUEST

BILL TO

Company Name: Talon CPE P.O. #:
Project Manager: CJones Company: Talon

Address: 408 W. Texas Attn:

City: Artesia State: NM Zip: 88210 Address:

Phone #: 631-6977 Fax #: City:

Project #: Project Owner: Live Rock State: Zip:

Project Name: WRLU 13 Phone #:

Project Location: Edgy, NM Fax #:

Sampler Name: CJONES

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX | | | | | | DATE | TIME | | | | | | | | | | |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|---------|----------|------|---|-----------|--|--|--|--|--|--|--|--|
| | | | | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER : | | | | | | | | | | | | |
| 1803403 | BG-1 | 0 | 1 | 1 | | | | | | 11-20-18 | 8:00 | 1 | Chlorides | | | | | | | | |
| 2 | BG-1 | 6"-R | | | | | | | | | 8:05 | | | | | | | | | | |
| 3 | BG-2 | 1-R | | | | | | | | | 8:10 | | | | | | | | | | |
| 4 | 5-1 | 0 | 1 | | | | | | | | 8:15 | | | | | | | | | | |
| 5 | 5-1 | 1-R | | | | | | | | | 8:20 | | | | | | | | | | |
| 6 | 5-2 | 0 | | | | | | | | | 8:25 | | | | | | | | | | |
| 7 | 5-2 | 6"-R | | | | | | | | | 8:30 | | | | | | | | | | |
| 8 | 5-3 | 0 | | | | | | | | | 8:35 | | | | | | | | | | |
| 9 | 5-3 | 6"-R | | | | | | | | | 8:40 | | | | | | | | | | |

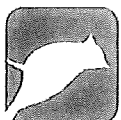
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Relinquished By: [Signature] Date: 11-20-18 Received By: [Signature] Phone Result: ☐ Yes ☐ No Add'l Phone #:

Relinquished By: [Signature] Date: 11-20-18 Time: 15:30 Received By: [Signature] Fax Result: ☐ Yes ☐ No Add'l Fax #:

Delivered By: (Circle One) UPS 8:40 #97 Sample Condition: ☒ Cool ☐ Intact ☐ Yes ☒ No ☐ No CHECKED BY: [Signature] (Initials)

Sampler - UPS - Bus - Other: 8:40 #97 ☒ Yes ☐ No ☐ No



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

| | | | | | | |
|----------------------------------|---------------------------------|-------------------|--------|------|--|--|
| Company Name: Talon CRE | P.O. #: | ANALYSIS REQUEST | | | | |
| Project Manager: C Jones | Company: Talon | | | | | |
| Address: 408 W. Texas | Attn: | | | | | |
| City: Albino | State: NM | Zip: 88210 | | | | |
| Phone #: 631-6977 | Fax #: | | | | | |
| Project #: | Project Owner: Line Rock | City: | State: | Zip: | | |
| Project Location: WRLU 13 | Phone #: | | | | | |
| Sampler Name: C Jones | Fax #: | | | | | |

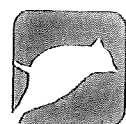
| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX | | | | | DATE | TIME | REMARKS |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|----------|------|-----------|
| | | | | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | | | |
| HS03403 | | | | | | | | | | | |
| 10 | S-4 | 0 | | | | | | | 11-20-18 | 8:45 | Chlorides |
| 11 | S-4 | 6" - R | | | | | | | | | |
| 12 | S-5 | 0 - R | | | | | | | | | |
| 13 | S-6 | 0 | | | | | | | | | |
| 14 | S-6 | 1 - R | | | | | | | | | |
| 15 | S-7 | 0 | | | | | | | | | |
| 16 | S-7 | 1 | | | | | | | | | |
| 17 | S-7 | 2 - R | | | | | | | | | |
| 18 | S-8 | 0 - R | | | | | | | | | |

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| | | | | |
|-------------------------------------|-----------------------|---------------------------------|--------------------|----------|
| Relinquished By: <i>[Signature]</i> | Date: 11-20-18 | Received By: <i>[Signature]</i> | Time: 15:36 | REMARKS: |
| Relinquished By: <i>[Signature]</i> | Date: 11-20-18 | Received By: <i>[Signature]</i> | Time: 15:36 | |

| | | |
|--|--|------------------------|
| Delivered By: (Circle One) | Sample Condition | CHECKED BY: (Initials) |
| Sampler - UPS - Bus - Other: 8:45 #97 | Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> | TD |

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| Company Name: <u>Talon LPE</u> | | | | P.O. #: | | | |
| Project Manager: <u>C Jones</u> | | | | Company: <u>Talon</u> | | | |
| Address: <u>408 W. Texas</u> | | | | Attn: | | | |
| City: <u>Alameda</u> | | | | Address: | | | |
| State: <u>NM</u> | | | | Zip: <u>88210</u> | | | |
| Phone #: <u>505-697-6977</u> | | | | Fax #: | | | |
| Project #: | | | | Project Owner: <u>Live Rock</u> | | | |
| Project Name: <u>WRLC 13</u> | | | | State: | | | |
| Project Location: <u>Eddy, NM</u> | | | | City: | | | |
| Sample Name: <u>C Jones</u> | | | | Phone #: | | | |
| FOR LAB USE ONLY | | | | Fax #: | | | |

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX | | | | | | DATE | TIME | ANALYSIS REQUEST |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|---------|----------|------|------------------|
| | | | | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER : | | | |
| H2034103 | | | | | | | | | | | | |
| 19 | 5-9 | 0 | | | | | | | | 11-20-08 | 935 | Chlorides |
| 20 | 5-9 | 6"-12" | | | | | | | | | 940 | |
| 21 | 5-10 | 0-R | | | | | | | | | 945 | |
| 22 | 5-11 | 0 | | | | | | | | | 950 | |
| 23 | 5-11 | 1-R | | | | | | | | | 955 | |

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| | | | |
|--|------------------------------|--|---------------------------|
| Relinquished By: <u>[Signature]</u> | | Received By: <u>[Signature]</u> | |
| Date: <u>11-20-18</u> | Date: <u>11-20-18</u> | Time: <u>15:30</u> | Time: <u>15:30</u> |
| Relinquished By: | | Received By: | |

| | | |
|---|--|--|
| Delivered By: (Circle One) Sampler - UPS - Bus - Other: <u>846 #497</u> | Sample Condition Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> | CHECKED BY: (Initials) <u>SB</u> |
|---|--|--|

| | | |
|---|---|-----------------------|
| REMARKS: | Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No | Add'l Phone #: |
| Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No | Add'l Fax #: | |