

Incident ID	nRM2005560297
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>~35.5</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

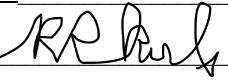
- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the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

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

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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: Rob Kirk Title: General Manager, HSE and Compliance

Signature:  Date: 12/11/2020

email: rob.kirk@solarismidstream.com Telephone: 432-203-9020

#### **OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	nRM2005560297
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## Remediation Plan

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

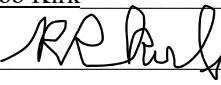
- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation 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: Rob Kirk \_\_\_\_\_ Title: General Manager, HSE and Compliance \_\_\_\_\_

Signature:  \_\_\_\_\_ Date: 12/11/2020 \_\_\_\_\_

email: [rob.kirk@solarismidstream.com](mailto:rob.kirk@solarismidstream.com) \_\_\_\_\_ Telephone: 432-203-9020 \_\_\_\_\_

**OCD Only**

Received by: Chad Hensley \_\_\_\_\_ Date: 02/26/2021 \_\_\_\_\_

Approved       Approved with Attached Conditions of Approval       Denied       Deferral Approved

Signature:  \_\_\_\_\_ Date: 02/26/2021 \_\_\_\_\_

# Site Assessment Report and Proposed Remediation Workplan

**Solaris Water Midstream, LLC**

**Berry SWD**

Eddy County, New Mexico

Unit Letter D, Section 20, Township 24 South, Range 29 East

Latitude 32.20896 North, Longitude 104.01385 West

**NMOCD Reference No. nRM2005560297**

Prepared By:

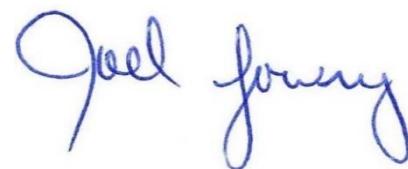
**Etech Environmental & Safety Solutions, Inc.**

3100 Plains Highway

Lovington, New Mexico 88260



Matthew Grieco



Joel W. Lowry



Midland • San Antonio • Lubbock • Lovington • Lafayette

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- Appendix B - Field Data and Soil Profile Logs
- Appendix C - Laboratory Analytical Reports
- Appendix D - Photographic Log

## 1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Solaris Water Midstream, LLC, has prepared this Report for the Release Site known as the Berry SWD. Details of the release are summarized below:

### Location of Release Source

Latitude: 32.20896      Longitude: -104.01385  
 Provided GPS are in WGS84 format.

Site Name:	Berry SWD	Site Type:	SWD
Date Release Discovered:	4/3/2020	API # (if applicable):	30-015-45367

Unit Letter	Section	Township	Range	County
D	20	24S	29E	Eddy

Surface Owner:  State  Federal  Tribal  Private (Name BERRY, CHESTER KENT & BERRY, BARBARA JEAN)

### Nature and Volume of Release

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 52	Volume Recovered (bbls) 22
	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"/> N/A
<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	Volume/Weight Recovered

#### Cause of Release:

At our Berry SWD we had increased pressure on our lines as a customer turned on an extra pump increasing volume and pressure without alerting our operations team. This increase caused a separation of the fitting on a flange at a riser entering the facility and on our operation pad, inside our perimeter diking. Upon discovery, the line was turned-in, we alerted our customer to turn off the additional volume, and we tightened the valve flange stopping the release.

### Initial Response

<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"/> Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.

Previously submitted portions of the NMOCD Form C-141 are available on the NMOCD Imaging System.

## 2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half mile radius of the Release Site. Groundwater gauging data from the nearest USGS Well (321234104005401) within 1/2 Mile radius suggests the depth to groundwater was 35.48 Ft as measured in 1975. USGS groundwater sampling data suggests USGS Well 321234104005401 exhibited chloride concentrations ranging from 19,900 to 26,000 mg/L during the last six (6) groundwater sampling events. It should be noted the USGS Well (321234104005401) is either incorrectly geolocated within the USGS National Water Information System or has since been plugged and abandoned; there is no water well in the vicinity of the provided location.

Additional USGS wells within 1/2 Mile radius were utilized to determine the probable minimum depth below any point within the horizontal boundary of the release to groundwater containing less than 10,000 mg/L TDS. Groundwater information is provided as Appendix A.

Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/L TDS.	> 61 Ft.	
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted on Figures 1 & 2.

### **3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE**

Based on the volume and nature of the release, the presence of groundwater containing over 10,000 mg/L TDS between 35 and 61 Ft. bgs, and NMOCD Siting Criteria, the NMOCD Closure Criteria for the Site is as follows:

<b>Closure Criteria for Soil Impacted by a Release</b>			
<b>Probable Depth to Groundwater less than 10,000 mg/L</b>	<b>Constituent</b>	<b>Method</b>	<b>Limit</b>
> 61 Ft.	Chloride	EPA 300.0 or SM4500 Cl B	10000 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	2500 mg/kg
	DRO + GRO	EPA SW-846 Method 8015M	1000 mg/kg
	BTEX	EPA SW-846 Methods 8021b or 8260b	50 mg/kg
	Benzene	EPA SW-846 Methods 8021b or 8260b	10 mg/kg

### **4.0 INITIAL SITE ASSESSMENT**

On July 6th, 2020, Etech conducted an initial site assessment. During the initial site assessment, a series of hand-augered soil bores were advanced within the release margins in an effort to determine the vertical extent of soil impacts. In addition, hand-augered soil bores were advanced at the inferred edges of the affected area in an effort to determine the horizontal extent of soil impacts. During the advancement of the hand-augered soil bores, field soil samples were collected and field-screened for the presence of Volatile Organic Compounds utilizing a Photoionization Detector (PID) and/or concentrations of chloride utilizing a Hach Quantab ® chloride test kit. A "Site & Sample Location Map" is provided as Figure 3. Field data and soil profile logs, if applicable, are provided as Appendix B.

Based on field observations and field test data, twelve (12) delineation soil samples (NH @ Surface, NH @ 1', EH @ Surface, EH @ 1', SH @ Surface, SH @ 1', WH @ Surface, WH @ 1', FL1 @ Surface, FL1 @ 4'-R, FL2 @ Surface, FL2 @ 1', FL3 @ Surface, and FL3 @ 4'-R) were submitted to the laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX and TPH concentration were below the applicable laboratory method detection limit (MDL) in each of the submitted soil samples with the exception of soil sample FL2 @ Surface, which exhibited a TPH concentration of 319 mg/kg. Analytical results indicated chloride concentrations ranged from 58.1 mg/kg in soil sample NH @ 1' to 6,110 mg/kg in soil sample FL3 @ Surface. Further advancement of the hand-augered soil bores was precluded due to the presence of an impenetrable rock layer.

On September 24, 2020, Etech revisited the Site. During the site visit, two (2) test trenches (STT and NTT) were advanced within the release margins in an effort to further investigate soil impacts from the release. During the advancement of the test trenches, two (2) soil samples (STT @ 5', and NTT @ 5') were collected and submitted to the laboratory for analysis of BTEX, TPH and chloride. Based on laboratory analytical results, soil within the release margins was not affected above the NMOCD Closure Criteria and the horizontal extent of impacted soil was adequately defined. A "Soil Chemistry Table" is provided as Table 1. Laboratory Analytical Reports are provided in Appendix C.

## 5.0 PROPOSED REMEDIATION PLAN

Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment, Solaris Water Midstream, LLC proposes the following remediation activities designed to advance the Site toward an approved closure:

- Utilizing mechanical equipment, excavate impacted material on the caliche well pad to an estimated depth of 1 Ft. bgs, or until laboratory analytical results from excavation confirmation soil samples collected from the floor of the excavation indicate BTEX, TPH and chloride concentrations are below the NMOCD Closure Criteria, whichever is greater.
- Excavation sidewalls will be advanced until laboratory analytical results from excavation confirmation soil samples indicate BTEX, TPH and chloride concentrations are below the NMOCD Closure Criteria and/or the NMOCD Reclamation Standard, as necessary.
- Excavated soil will be transported to an NMOCD-permitted surface waste facility for disposal.
- Upon receiving laboratory analytical results from excavation confirmation soil samples, backfill the excavated area with locally sourced, non-impacted "like" material.
- Upon completion of remediation activities, a *Remediation Summary and Soil Closure Request* will be prepared detailing field activities and laboratory analytical results from confirmation soil samples.

## 6.0 SAMPLING PLAN

Upon completion of excavation activities, representative five-point composite excavation confirmation soil samples will be collected from the excavation sidewalls in each cardinal direction, representing no more than 50 linear ft. A minimum of one (1) representative five-point composite excavation confirmation soil sample will be collected from the base of the excavated area representing every 200 square feet. Additional, discrete grab samples will be collected from wet or visibly stained areas inferred to have been affected by the release, as necessary.

## 7.0 TIMELINE AND ESTIMATED VOLUME OF SOIL TO BE REMEDIATED

Remediation activities are expected to be completed within 90 days of receiving necessary approval(s) of the Site Assessment Summary and Proposed Remediation Plan. Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment it is estimated that approximately 120 cubic yards is in need of removal.

## **8.0 RESTORATION, RECLAMATION AND RE-VEGETATION PLAN**

Areas affected by remediation and closure activities will be substantially restored to the condition that existed prior to the release, to the extent practicable. Excavated areas will be backfilled with locally sourced, non-impacted "like" material placed at or near original relative positions. The affected area will be contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable. The affected area was limited to an active production facility therefore reseeding will not be required. Final reclamation will be completed in accordance with NMAC 19.15.29.13 once the facility is no longer reasonably needed for production operations.

## **9.0 LIMITATIONS**

Etech Environmental & Safety Solutions, Inc., has prepared this Site Assessment Report and Proposed Remediation Plan to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents reference in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Solaris Water Midstream, LLC. Use of the information contained in this report is prohibited without the consent of Etech and/or Solaris Water Midstream, LLC.

## 11.0 DISTRIBUTION

### ***Solaris Water Midstream, LLC***

*907 Tradewinds Blvd*

*Ste B*

*Midland, TX 79706*

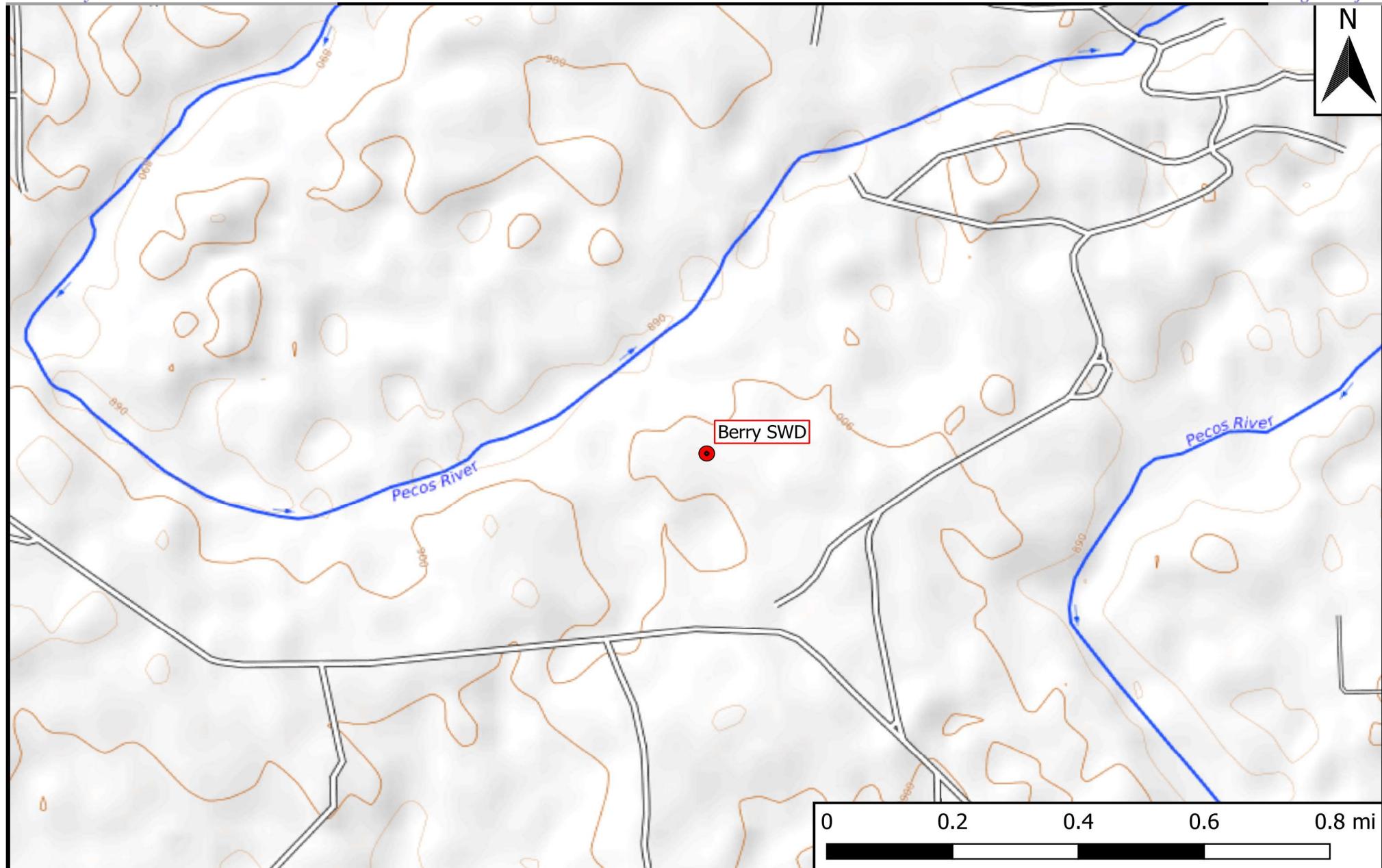
### ***New Mexico Energy, Minerals and Natural Resources Department***

*Oil Conservation Division, District 2*

*811 S. First Street*

*Artesia, NM 88210*

**Figure 1**  
**Topographic Map**

**Legend**

● Site Location

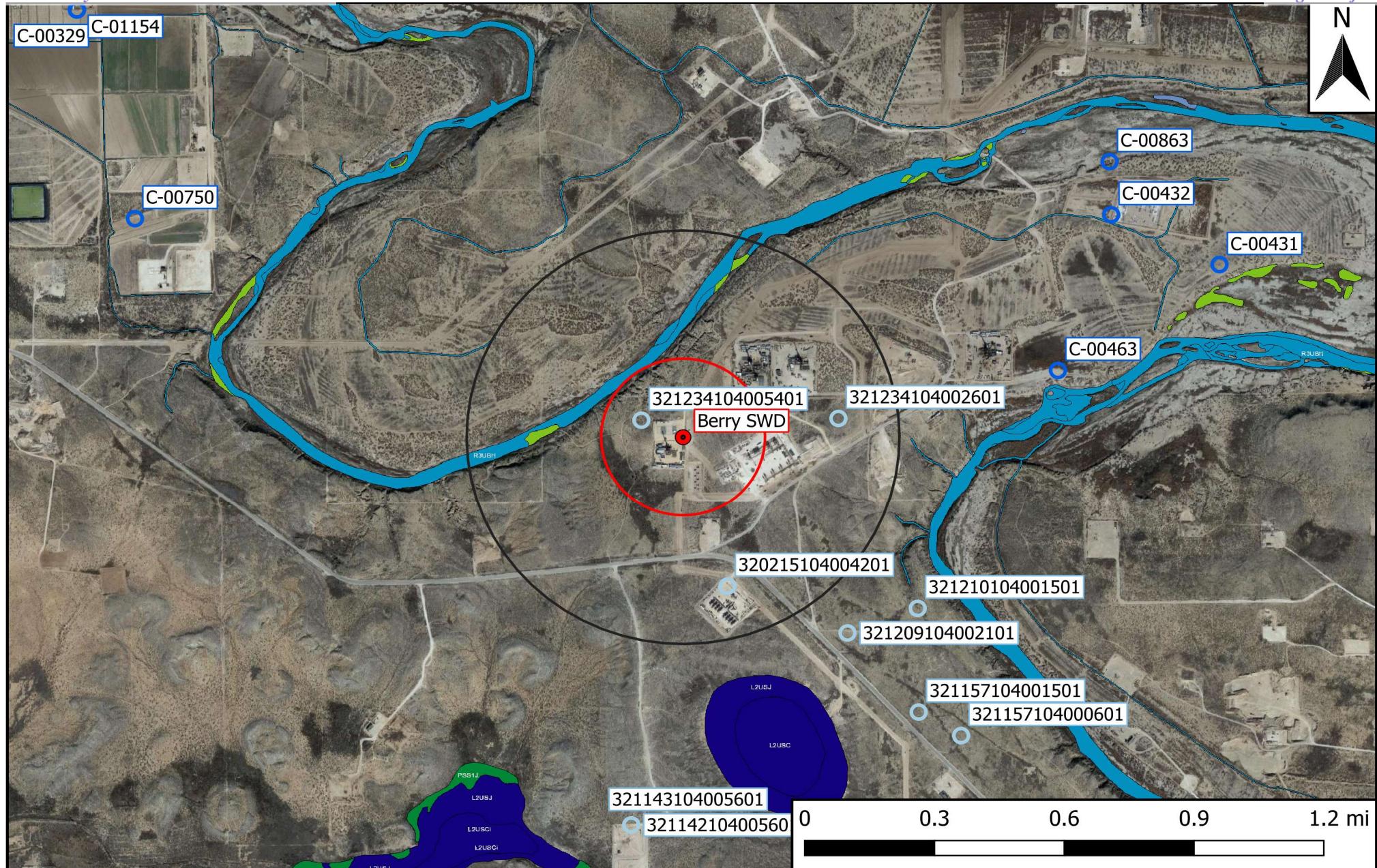
**Figure 1**  
Topographic Map  
Solaris Water Midstream, LLC  
Berry SWD  
GPS: 32.20896, -104.01385  
Eddy County



Drafted: mag Checked: jwl

Date: 6/30/20

**Figure 2**  
**Aerial Proximity Map**



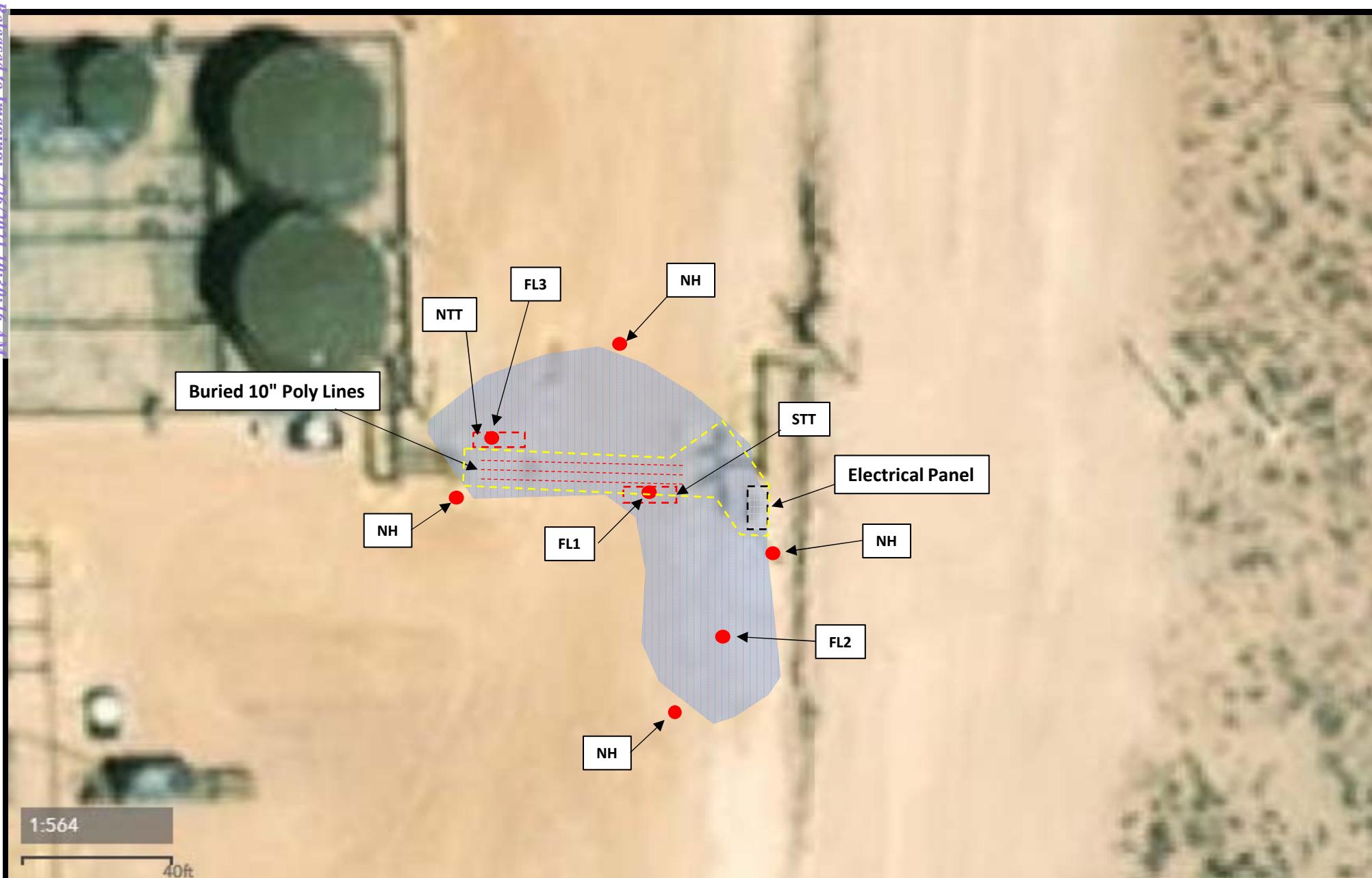
	0.5 Mi Radius
● Site Location	
○ Well - NMOSE	
○ Well - USGS	
■ High Karst	
— Potash Mine Workings	
■ 1000 Ft Radius	
■ 1% Annual Flood Chance	
■ Lake/Freshwater Pond	
■ Emergent/Forested Wetlands	
■ Riverine	

**Figure 2**  
Aerial Map  
Solaris Water Midstream, LLC  
Berry SWD  
GPS: 32.20896, -104.01385  
Eddy County

**eTECH**  
Environmental & Safety Solutions, Inc.

Drafted: mag Checked: jwl Date: 6/30/20

**Figure 3**  
**Site and Sample Location Map**

**Legend:**

- Sample Point
- Affected Area
- Buried Pipeline
- Test Trench
- Area Proposed to be Deferred

**Figure 3**  
Site and Sample Location Map  
Solaris Water Midstream, LLC  
Berry SWD  
GPS: 32.20896, -104.01385  
Eddy County



Drafted: jwl      Checked: lc      Date: 10/2/20

**Table 1**  
**Concentrations of BTEX, TPH, and/or Chloride in Soil**

**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL**  
**Solaris Water Midstream, LLC**  
**Berry SWD**  
**NMOCD Ref. #: nRM2005560297**

NMOCD Closure Criteria				10	50	-	-	1000	-	2500	10000
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	
NH @ Surface	7/6/2020	0'	In-Situ	0.00666	0.03	<50.0	<50.0	<50.0	<50.0	<50.0	126
NH @ 1'	7/6/2020	1'	In-Situ	<0.00199	0.00218	<49.9	<49.9	<49.9	<49.9	<49.9	58.1
EH @ Surface	7/6/2020	0'	In-Situ	0.00662	0.0297	<49.8	<49.8	<49.8	<49.8	<49.8	111
EH @ 1'	7/6/2020	1'	In-Situ	0.00574	0.0237	<49.9	<49.9	<49.9	<49.9	<49.9	175
SH @ Surface	7/6/2020	0'	In-Situ	0.00707	0.0275	<50.0	<50.0	<50.0	<50.0	<50.0	118
SH @ 1'	7/6/2020	1'	In-Situ	0.00547	0.0228	<49.9	<49.9	<49.9	<49.9	<49.9	58.9
WH @ Surface	7/6/2020	0'	In-Situ	<0.00200	0.00455	<49.8	<49.8	<49.8	<49.8	<49.8	116
WH @ 1'	7/6/2020	1'	In-Situ	0.00411	0.0161	<50.0	<50.0	<50.0	<50.0	<50.0	65.6
FL1 @ Surface	7/6/2020	0'	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	3,300
FL1 @ 4'-R	7/6/2020	4'	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	1,590
FL2 @ Surface	7/6/2020	0'	In-Situ	0.00869	0.0323	<49.8	238	238	81.2	319	1,570
FL2 @ 1'	7/6/2020	1'	In-Situ	0.00621	0.0235	<50.0	<50.0	<50.0	<50.0	<50.0	364
FL3 @ Surface	7/6/2020	0'	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	6,110
FL3 @ 4'-R	7/6/2020	4'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	3,710
STT @ 5'	9/24/2020	5'	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	158
NTT @ 5'	9/24/2020	5'	In-Situ	<0.00196	<0.00196	<49.9	<49.9	<49.9	<49.9	<49.9	362

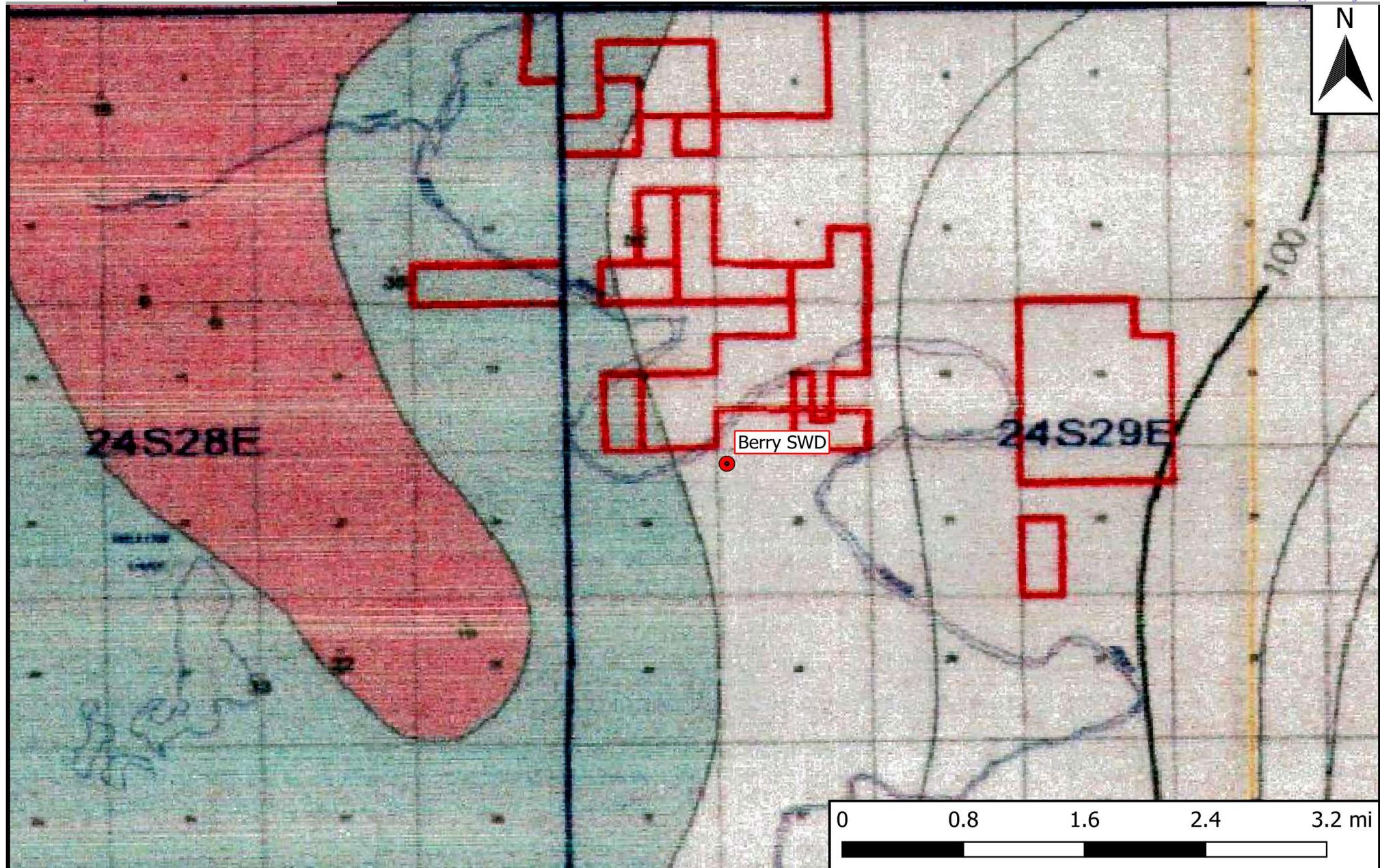
**NOTES:**

- = Sample not analyzed for that constituent.

**Bold** text denotes a concentration that exceeds the NMOCD Closure Criteria

## **Appendix A''**

### **""""Groundwater Information**

**Legend**

● Site Location

**Figure 4**  
Inferred Depth to Groundwater Trend Map  
Solaris Water Midstream, LLC  
Berry SWD  
GPS: 32.20896, -104.01385  
Eddy County

**eTECH**  
Environmental & Safety Solutions, Inc.

Drafted: mag Checked: jwl

Date: 6/30/20

**Legend**

- Site Location
- Well - USGS
- 0.5 Mi Radius
- 1000 Ft Radius

**Figure 5**

USGS Well Proximity Map  
Solaris Water Midstream, LLC  
Berry SWD  
GPS: 32.20896, -104.01385  
Eddy County



Drafted: mag Checked: jwl Date: 6/30/20



**Figure 6**  
USGS Well Water Quality Map  
Solaris Water Midstream, LLC  
Berry SWD  
GPS: 32.20896, -104.01385  
Eddy County



Drafted: mag Checked: jwl Date: 10/2/20



USGS Home  
Contact USGS  
Search USGS

## National Water Information System: Web Interface

USGS Water Resources

Data Category:  
Water Quality

Geographic Area:  
United States

GO

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Water Quality Samples for the Nation

To view additional data-quality attributes, output the results using these options: one result per row, expanded attributes.

Additional precautions are [here](#).

## USGS 321234104005401 24S.29E.19.222

Available data for this site

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°12'34", Longitude 104°00'54" NAD27

Land-surface elevation 2,940 feet above NGVD29

### Output formats

Parameter Group Period of Record table
<a href="#">Inventory of available water-quality data for printing</a>
<a href="#">Inventory of water-quality data with retrieval</a>
<a href="#">Tab-separated data, one result per row</a>
<a href="#">Tab-separated data one sample per row with remark codes combined with values</a>
<a href="#">Tab-separated data one sample per row with tab-delimiter for remark codes</a>
<a href="#">Reselect output format</a>

Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Temperature, water, deg C (00010)	Specific conductance, wat unf uS/cm @ 25 degC (00095)	Chloride, water, filtrd, mg/L (00940)	Density water unfiltrd 20 degC g/mL (71820)
1970-06-05 14:30	MDT	T	WG	20.5	61000	22800	1.0
1972-05-12 13:35	MDT	T	WG		55700	20900	1.0
1972-11-14 15:35	MST	T	WG		54800	19900	1.0
1974-07-23 11:05	MDT	T	WG	20.0	69700	26600	1.0

Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Temperature, water, deg C (00010)	Specific conductance, wat unf uS/cm @ 25 degC (00095)	Chloride, water, filtrd, mg/L (00940)	Density water unfiltrd 20 degC g/mL (71820)
1974-12-17 12:15	MST	T	WG	19.0	58200	21000	1.0
1975-07-14 15:25	MDT	T	WG	20.5	58000	20600	1.0

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43.77 0.4 nadww01



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USGS Water Resources

Data Category:  
Water Quality

Geographic Area:  
United States

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Water Quality Samples for the Nation

To view additional data-quality attributes, output the results using these options: one result per row, expanded attributes.

Additional precautions are [here](#).

## USGS 321234104002601 24S.29E.20.122

Available data for this site

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°12'34", Longitude 104°00'26" NAD27

Land-surface elevation 2,950 feet above NGVD29

### Output formats

Parameter Group Period of Record table
<a href="#">Inventory of available water-quality data for printing</a>
<a href="#">Inventory of water-quality data with retrieval</a>
<a href="#">Tab-separated data, one result per row</a>
<a href="#">Tab-separated data one sample per row with remark codes combined with values</a>
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Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Temperature, water, deg C (00010)	Specific conductance, wat unf uS/cm @ 25 degC (00095)	Chloride, water, filtrd, mg/L (00940)	Density water unfiltrd 20 degC g/mL (71820)
1970-06-05 14:10	MDT	T	WG	22.0	134000	62500	1.1
1972-05-12 11:55	MDT	T	WG		94400	38200	1.0
1972-11-14 13:50	MST	T	WG		97200	41000	1.0
1974-07-18 13:05	MDT	T	WG	21.5	114000	49800	1.1

Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Temperature, water, deg C (00010)	Specific conductance, wat unf uS/cm @ 25 degC (00095)	Chloride, water, filtrd, mg/L (00940)	Density water unfiltrd 20 degC g/mL (71820)
1974-12-17 10:55	MST	T	WG	19.5	116000	53500	1.1
1975-07-14 14:15	MDT	T	WG	22.0	120000	27800	1.1
1976-01-12 14:30	MST	T	WG	20.0	127000	66200	

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0.62 0.54 nadww02



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## National Water Information System: Web Interface

USGS Water Resources

Data Category:  
Water Quality

Geographic Area:  
United States

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Water Quality Samples for the Nation

To view additional data-quality attributes, output the results using these options: one result per row, expanded attributes.

Additional precautions are [here](#).

## USGS 321222104003501 24S.29E.20.141

Available data for this site Water-Quality: Field/Lab samples

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°12'22", Longitude 104°00'35" NAD27

Land-surface elevation 2,970 feet above NGVD29

This well is completed in the Rustler Formation (312RSLR) local aquifer.

### Output formats

Parameter Group Period of Record table
<a href="#">Inventory of available water-quality data for printing</a>
<a href="#">Inventory of water-quality data with retrieval</a>
<a href="#">Tab-separated data, one result per row</a>
<a href="#">Tab-separated data one sample per row with remark codes combined with values</a>
<a href="#">Tab-separated data one sample per row with tab-delimiter for remark codes</a>
<a href="#">Reselect output format</a>

Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Temperature, water, deg C (00010)	Specific conductance, wat unf uS/cm @ 25 degC (00095)	Chloride, water, filtrd, mg/L (00940)	Density water unfiltrd 20 degC g/mL (71820)
1970-01-23 14:20	MST	T	WG	21.5	228000	181000	1.2
1970-06-05 15:30	MDT	T	WG	22.0	229000	181000	1.2
1972-05-12 11:35	MDT	T	WG		226000	170000	1.2

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**Title: Water Quality Samples for USA: Sample Data**

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USGS Water Resources

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### Water Quality Samples for the Nation

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## USGS 320215104004201 24S.29E.20.134

Available data for this site

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°12'13", Longitude 104°00'42" NAD27

Land-surface elevation 2,960 feet above NGVD29

This well is completed in the Culebra Dolomite Member of Rustler Formation (312CLBR) local aquifer.

### Output formats

<a href="#">Parameter Group Period of Record table</a>
<a href="#">Inventory of available water-quality data for printing</a>
<a href="#">Inventory of water-quality data with retrieval</a>
<a href="#">Tab-separated data, one result per row</a>
<a href="#">Tab-separated data one sample per row with remark codes combined with values</a>
<a href="#">Tab-separated data one sample per row with tab-delimiter for remark codes</a>
<a href="#">Reselect output format</a>

Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Temperature, water, deg C (00010)	Specific conductance, wat unf uS/cm @ 25 degC (00095)	Hydrogen ion, water, unfiltrd calcd, mg/L (00191)	pH, water, unfiltrd field, std units (00400)	Chloride, water, filtrd, mg/L (00940)	Density water unfiltrd 20 degC g/mL (71820)	Depth of hole, feet below LSD (72001)
1970-01-23 15:40	MST	T	WG	21.5	225000			171000		1.2
1970-06-05 15:15	MDT	T	WG	22.0	229000			175000		1.2
1972-05-08 14:35	MDT	T	WG		223000			166000		1.2
1972-11-13 11:55	MST	T	WG		223000			169000		1.2
1974-07-18 14:15	MDT	T	WG	21.0	230000			173000		1.2
1974-12-16 09:40	MST	T	WG	19.0	223000			173000		1.2
1975-07-14 14:00	MDT	T	WG	22.0	225000			172000		1.2
1976-01-12 11:35	MST	T	WG	21.0	224000			177000		
1976-06-29 09:45	MDT	T	WG	21.0	225000	0.00006	7.2	174000		

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**Title:** Water Quality Samples for USA: Sample Data

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USGS Water Resources

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### Water Quality Samples for the Nation

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Additional precautions are [here](#).

## USGS 321210104001501 24S.29E.20.412

Available data for this site Water-Quality: Field/Lab samples

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°12'10", Longitude 104°00'15" NAD27

Land-surface elevation 2,949 feet above NGVD29

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

### Output formats

Parameter Group Period of Record table
Inventory of available water-quality data for printing
Inventory of water-quality data with retrieval
Tab-separated data, one result per row
Tab-separated data one sample per row with remark codes combined with values
Tab-separated data one sample per row with tab-delimiter for remark codes
Reselect output format

Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Temperature, water, deg C (00010)	Specific conductance, wat unf uS/cm @ 25 degC (00095)	Chloride, water, filtrd, mg/L (00940)	Density water unfiltrd 20 degC g/mL (71820)	Depth of hole, feet below LSD (72001)
1970-01-23 14:55	MST	T	WG	21.5	188000	106000	1.1	102
1970-06-05 13:15	MDT	T	WG	22.0	187000	105000	1.1	102
1972-05-12 11:05	MDT	T	WG		182000	101000	1.1	
1972-11-14 10:55	MST	T	WG		178000	98000	1.1	
1974-07-18 13:30	MDT	T	WG	21.5	182000	103000	1.1	
1974-12-17 11:25	MST	T	WG	19.5	181000	102000	1.1	
1975-07-14 14:50	MDT	T	WG		179000	99000	1.1	
1976-01-12 15:00	MST	T	WG	19.5	182000	102000		

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### Water Quality Samples for the Nation

To view additional data-quality attributes, output the results using these options: one result per row, expanded attributes.

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## USGS 321209104002101 24S.29E.20.322

Available data for this site Water-Quality: Field/Lab samples GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°12'07", Longitude 104°00'25" NAD27

Land-surface elevation 2,955 feet above NGVD29

This well is completed in the Culebra Dolomite Member of Rustler Formation (312CLBR) local aquifer.

### Output formats

Parameter Group Period of Record table
Inventory of available water-quality data for printing
Inventory of water-quality data with retrieval
Tab-separated data, one result per row
Tab-separated data one sample per row with remark codes combined with values
Tab-separated data one sample per row with tab-delimiter for remark codes
Reselect output format

Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Temperature, water, deg C (00010)	Specific conductance, wat unf uS/cm @ 25 degC (00095)	Chloride, water, filtrd, mg/L (00940)	Density water unfiltrd 20 degC g/mL (71820)	Depth of hole, feet below LSD (72001)
1970-01-23 14:35	MST	T	WG	21.5	217000	153000	1.2	96
1970-06-05 13:30	MDT	T	WG	22.0	220000	154000	1.2	96
1972-05-12 11:25	MDT	T	WG		214000	144000	1.2	
1972-11-14 11:15	MST	T	WG		216000	149000	1.2	
1974-07-18 13:25	MDT	T	WG	21.0	222000	149000	1.2	
1974-12-17 11:10	MST	T	WG	19.5	217000	152000	1.2	
1975-07-14 14:35	MDT	T	WG	21.5	219000	157000	1.2	
1976-01-12 14:45	MST	T	WG	19.5	219000	160000		

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**Title:** Water Quality Samples for USA: Sample Data

**URL:** <https://nwis.waterdata.usgs.gov/nwis/qwdata?>



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0.53 0.49 nadww02



## National Water Information System: Web Interface

USGS Water Resources

Data Category:  
GroundwaterGeographic Area:  
United States

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Groundwater levels for the Nation

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Agency code = usgs

site\_no list =

- 320215104004201

Minimum number of levels = 1

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Eddy County, New Mexico

Latitude 32°12'13", Longitude 104°00'42" NAD27

Land-surface elevation 2,960 feet above NGVD29

This well is completed in the Culebra Dolomite Member of Rustler Formation (312CLBR) local aquifer.

**Output formats**

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1975-07-14	D	61.8	1	Z	USGS	S	A				

**Explanation**

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	1	Water level accuracy to nearest tenth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	Z	Other.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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## National Water Information System: Web Interface

USGS Water Resources

Data Category:  
GroundwaterGeographic Area:  
United States

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Groundwater levels for the Nation

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Eddy County, New Mexico

Latitude 32°12'07", Longitude 104°00'25" NAD27

Land-surface elevation 2,955 feet above NGVD29

This well is completed in the Culebra Dolomite Member of Rustler Formation (312CLBR) local aquifer.

**Output formats**

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1975-07-14	D	59.9				1	Z	USGS	S	A	

**Explanation**

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	1	Water level accuracy to nearest tenth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	Z	Other.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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## National Water Information System: Web Interface

USGS Water Resources

Data Category:	Groundwater	Geographic Area:	United States	GO
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     • 321210104001501

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Eddy County, New Mexico

Latitude 32°12'10", Longitude 104°00'15" NAD27

Land-surface elevation 2,949 feet above NGVD29

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

**Output formats**

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1974-12-17		D	59.66			2			Z	USGS	S A
1975-07-14		D	60.33			2			Z	USGS	S A

**Explanation**

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	Z	Other.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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## National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

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Groundwater levels for the Nation

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Agency code = usgs  
 site\_no list =  
     • 321234104002601

Minimum number of levels = 1

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Eddy County, New Mexico  
 Latitude 32°12'34", Longitude 104°00'26" NAD27  
 Land-surface elevation 2,950 feet above NGVD29

## Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1974-12-17		D	57.11			2			Z	USGS	S
1975-07-14		D	57.55			2			Z	USGS	S

## Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	Z	Other.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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## National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

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Groundwater levels for the Nation

## Search Results -- 1 sites found

Agency code = usgs  
 site\_no list =  
     • 321234104005401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload**USGS 321234104005401 24S.29E.19.222**

Eddy County, New Mexico  
 Latitude 32°12'34", Longitude 104°00'54" NAD27  
 Land-surface elevation 2,940 feet above NGVD29

## Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1974-12-17		D	34.04			2			Z	USGS	S
1975-07-14		D	35.48			2			Z	USGS	S

## Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	Z	Other.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

[Questions about sites/data?](#)[Feedback on this web site](#)[Automated retrievals](#)[Help](#)[Data Tips](#)[Explanation of terms](#)[Subscribe for system changes](#)[News](#)

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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels>Page Contact Information: [USGS Water Data Support Team](#)

Released to Imaging: 2/26/2021 10:30:16 AM





## **Appendix B**

### **Field Data and Soil Profile Logs**

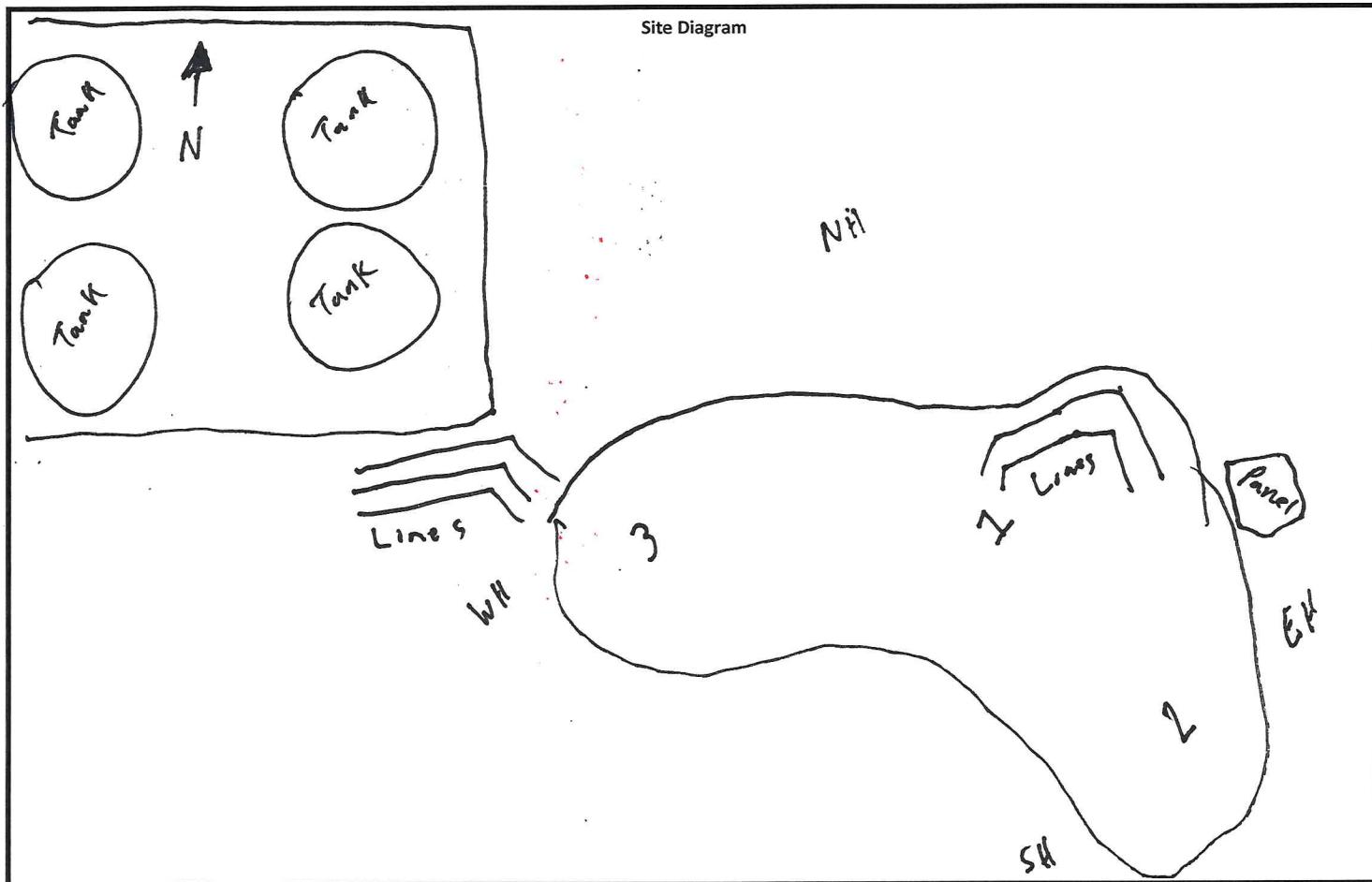
# Initial Release Assessment Form

Date: 7-6-20
 Project: Berry SWD  
 Project Number: Pending

 Clean Up Level:  
600 mg/kg Cl-, 100 mg/kg TPH  
 Latitude: 32.20896

 Longitude: -104.01385

Site Diagram

**Notes:**

hard surface, rocky, hard with Auger, Hard to see stain  
 Large poly lines

~Length: 25'~Width: 25'

~Area:

~Depth: 4'

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

3-4 Representative Pictures of the Affected Area including sample locations?

Necessary Samples Field Screened and on Ice?

Sample and Field Screen Data Entered on Sample Log?

Was horizontal and vertical delineation achieved?

South Line - 3' - east side

Middle Line - 2' 9" ~~east~~ side

North Line - 2' 9" east side

South Line - 2' 8" west side

North Line 3' west side

South line 2' 10" - middle

# Sample Log

Date:

7-6-20

Project: Berry SWD      Project Number: Pending      Latitude: 32.20896      Longitude: -104.01385

Sample ID	PID/Odor	Chloride Conc.	GPS
FL1 @ Surface	none	9584 *	
FL1 @ 1'-R	none	6260 *	
FL2 @ Surface	none	2768	
FL2 @ 1'	none	3852 *	
FL2 @ 2'	none	2232 *	
FL2 @ 3'	none	2076 *	
FL2 @ 4'-R	none	1692	
FL3 @ Surface	none	1300	
FL3 @ 1'	none	536	
FL4 @ Surface	none	1200 *	
FL4 @ 1'-R	none	1692 *	
FL5 @ Surface	none	2460	
FL5 @ 1'	none	5316 *	
FL5 @ 2'	none	4524 *	
FL5 @ 3'	none	3852 *	
FL5 @ 4'-R	none	2768	
NH @ Surface	none	284	
NH @ 1'	none	212	
EH @ Surface	none	360	
EH @ 1'	none	284	
SH @ Surface	none	212	
SH @ 1'	none	284	
WH @ Surface	none	360	
WH @ 1'	none	212	
TT5 @ 5'	none	224	
TTN @ 5'	none	316	

Sample Point = SP #1 @ ## etc

Test Trench = TT #1 @ ##

Resamples= SP #1 @ 5b or SW #1b

Floor = FL #1 etc

Refusal = SP #1 @ 4'-R

Stockpile = Stockpile #1

Sidewall = SW #1 etc

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

GPS Sample Points, Center of Comp Areas

\* Did NOT Go To LAB



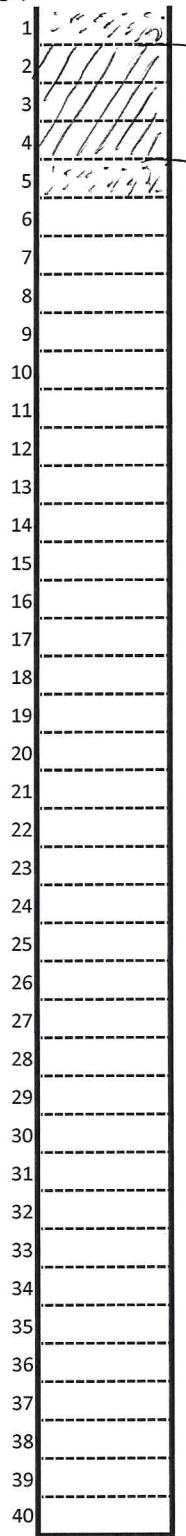
## Soil Profile

Date:

7/6/20

Project: Berry SWD      Project Number: Pending      Latitude: 32.20896      Longitude: -104.01385

Depth (ft. bgs)



Description

Caliche Pal  
red / Brown Ord  
" " " "  
Caliche Sov'

## **Appendix C**

### **Laboratory Analytical Reports**

# Certificate of Analysis Summary 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX

**Project Name: Berry SWD**

**Project Id:** 12700

**Date Received in Lab:** Wed 07.08.2020 11:15

**Contact:** PM

**Report Date:** 07.10.2020 16:31

**Project Location:** Eddy County (Loving, NM)

**Project Manager:** Jessica Kramer

<b>Analysis Requested</b>	<b>Lab Id:</b> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	666538-001 NH @ Surface 1- ft SOIL 07.06.2020 00:00	666538-002 NH @ 1' SOIL 07.06.2020 00:00	666538-003 EH @ Surface SOIL 07.06.2020 00:00	666538-004 EH @ 1' SOIL 07.06.2020 00:00	666538-005 SH @ Surface SOIL 07.06.2020 00:00	666538-006 SH @ 1' 1- ft SOIL 07.06.2020 00:00
<b>BTEX by EPA 8021B</b>	<b>Extracted:</b> <i>Analyzed:</i> <i>Units/RL:</i>	07.08.2020 14:00 07.08.2020 16:32 mg/kg	07.08.2020 14:00 07.08.2020 16:52 RL	07.08.2020 14:00 07.08.2020 17:13 mg/kg	07.08.2020 14:00 07.08.2020 17:33 RL	07.08.2020 14:00 07.08.2020 17:54 mg/kg	07.08.2020 14:00 07.08.2020 18:14 RL
Benzene		0.00666 0.00199	<0.00199 0.00199	0.00662 0.00200	0.00574 0.00200	0.00707 0.00201	0.00547 0.00200
Toluene		0.0233 0.00199	0.00218 0.00199	0.0231 0.00200	0.0180 0.00200	0.0204 0.00201	0.0173 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00400 0.00400	<0.00400 0.00400	<0.00402 0.00402	<0.00399 0.00399
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total BTEX		0.0300 0.00199	0.00218 0.00199	0.0297 0.00200	0.0237 0.00200	0.0275 0.00201	0.0228 0.00200
<b>Chloride by EPA 300</b>	<b>Extracted:</b> <i>Analyzed:</i> <i>Units/RL:</i>	07.09.2020 08:15 07.09.2020 10:28 mg/kg	07.09.2020 08:15 07.09.2020 10:33 RL	07.09.2020 08:15 07.09.2020 10:48 mg/kg	07.09.2020 08:15 07.09.2020 10:53 RL	07.09.2020 08:15 07.09.2020 10:58 mg/kg	07.09.2020 08:15 07.09.2020 11:03 RL
Chloride		126 25.2	58.1 24.8	111 25.3	175 25.3	118 25.3	58.9 25.0
<b>TPH By SW8015 Mod</b>	<b>Extracted:</b> <i>Analyzed:</i> <i>Units/RL:</i>	07.08.2020 16:30 07.09.2020 01:51 mg/kg	07.08.2020 16:30 07.09.2020 02:48 RL	07.08.2020 16:30 07.09.2020 03:06 mg/kg	07.08.2020 16:30 07.09.2020 03:25 RL	07.08.2020 16:30 07.09.2020 03:44 mg/kg	07.08.2020 16:30 07.09.2020 04:03 RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9

BRL - Below Reporting Limit

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



# Certificate of Analysis Summary 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX

**Project Id:** 12700  
**Contact:** PM  
**Project Location:** Eddy County (Loving, NM)

**Project Name:** Berry SWD

**Date Received in Lab:** Wed 07.08.2020 11:15

**Report Date:** 07.10.2020 16:31

**Project Manager:** Jessica Kramer

<b>Analysis Requested</b>		<b>Lab Id:</b> 666538-007	<b>Field Id:</b> WH @ Surface	<b>Depth:</b> 1- ft	<b>Matrix:</b> SOIL	<b>Sampled:</b> 07.06.2020 00:00	<b>Lab Id:</b> 666538-008	<b>Field Id:</b> WH @ 1'	<b>Depth:</b> 4- ft	<b>Matrix:</b> SOIL	<b>Sampled:</b> 07.06.2020 00:00	<b>Lab Id:</b> 666538-009	<b>Field Id:</b> FL1 @ Surface	<b>Depth:</b> 4- ft	<b>Matrix:</b> SOIL	<b>Sampled:</b> 07.06.2020 00:00	<b>Lab Id:</b> 666538-010	<b>Field Id:</b> FL1 @ 4'-R	<b>Depth:</b> 4- ft	<b>Matrix:</b> SOIL	<b>Sampled:</b> 07.06.2020 00:00	<b>Lab Id:</b> 666538-011	<b>Field Id:</b> FL2 @ Surface	<b>Depth:</b> 1- ft	<b>Matrix:</b> SOIL	<b>Sampled:</b> 07.06.2020 00:00	<b>Lab Id:</b> 666538-012	<b>Field Id:</b> FL2 @ 1'	<b>Depth:</b> 1- ft	<b>Matrix:</b> SOIL	<b>Sampled:</b> 07.06.2020 00:00
<b>BTEX by EPA 8021B</b>		<b>Extracted:</b> 07.08.2020 14:00					<b>Extracted:</b> 07.08.2020 14:00					<b>Extracted:</b> 07.08.2020 14:00				<b>Extracted:</b> 07.08.2020 14:00					<b>Extracted:</b> 07.08.2020 14:00					<b>Extracted:</b> 07.08.2020 14:00					
		<b>Analyzed:</b> 07.08.2020 18:35					<b>Analyzed:</b> 07.08.2020 18:55					<b>Analyzed:</b> 07.08.2020 19:16				<b>Analyzed:</b> 07.08.2020 19:37					<b>Analyzed:</b> 07.08.2020 20:59					<b>Analyzed:</b> 07.08.2020 21:19					
		<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL			<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL				
Benzene		<0.00200	0.00200				0.00411	0.00202				<0.00199	0.00199			<0.00201	0.00201				0.00869	0.00201				0.00621	0.00201				
Toluene		0.00455	0.00200				0.0120	0.00202				<0.00199	0.00199			<0.00201	0.00201				0.0236	0.00201				0.0173	0.00201				
Ethylbenzene		<0.00200	0.00200				<0.00202	0.00202				<0.00199	0.00199			<0.00201	0.00201				<0.00201	0.00201				<0.00201	0.00201				
m,p-Xylenes		<0.00401	0.00401				<0.00404	0.00404				<0.00398	0.00398			<0.00402	0.00402				<0.00402	0.00402				<0.00402	0.00402				
o-Xylene		<0.00200	0.00200				<0.00202	0.00202				<0.00199	0.00199			<0.00201	0.00201				<0.00201	0.00201				<0.00201	0.00201				
Total Xylenes		<0.00200	0.00200				<0.00202	0.00202				<0.00199	0.00199			<0.00201	0.00201				<0.00201	0.00201				<0.00201	0.00201				
Total BTEX		0.00455	0.00200				0.0161	0.00202				<0.00199	0.00199			<0.00201	0.00201				0.0323	0.00201				0.0235	0.00201				
<b>Chloride by EPA 300</b>		<b>Extracted:</b> 07.09.2020 08:15					<b>Extracted:</b> 07.09.2020 08:15					<b>Extracted:</b> 07.09.2020 08:15				<b>Extracted:</b> 07.09.2020 08:30					<b>Extracted:</b> 07.09.2020 08:30					<b>Extracted:</b> 07.09.2020 08:30					
		<b>Analyzed:</b> 07.09.2020 11:08					<b>Analyzed:</b> 07.09.2020 11:13					<b>Analyzed:</b> 07.09.2020 11:18				<b>Analyzed:</b> 07.09.2020 10:46					<b>Analyzed:</b> 07.09.2020 11:05					<b>Analyzed:</b> 07.09.2020 11:11					
		<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL			<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL				
Chloride		116	25.0				65.6	25.2				3300	24.9			1590	25.0				1570	50.2				364	25.0				
<b>TPH By SW8015 Mod</b>		<b>Extracted:</b> 07.08.2020 16:30					<b>Extracted:</b> 07.08.2020 16:30					<b>Extracted:</b> 07.08.2020 16:30				<b>Extracted:</b> 07.08.2020 16:30					<b>Extracted:</b> 07.08.2020 16:30					<b>Extracted:</b> 07.08.2020 16:30					
		<b>Analyzed:</b> 07.09.2020 04:21					<b>Analyzed:</b> 07.09.2020 04:40					<b>Analyzed:</b> 07.09.2020 04:58				<b>Analyzed:</b> 07.09.2020 05:17					<b>Analyzed:</b> 07.09.2020 05:54					<b>Analyzed:</b> 07.09.2020 06:12					
		<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL			<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL				<b>Units/RL:</b> mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8				<50.0	50.0				<50.0	50.0			<50.0	50.0				<49.8	49.8				<50.0	50.0				
Diesel Range Organics (DRO)		<49.8	49.8				<50.0	50.0				<50.0	50.0			<50.0	50.0				238	49.8				<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8				<50.0	50.0				<50.0	50.0			<50.0	50.0				81.2	49.8				<50.0	50.0				
Total TPH		<49.8	49.8				<50.0	50.0				<50.0	50.0			<50.0	50.0				319	49.8				<50.0	50.0				

BRL - Below Reporting Limit

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# Certificate of Analysis Summary 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX

**Project Name: Berry SWD****Project Id:** 12700**Contact:** PM**Project Location:** Eddy County (Loving, NM)**Date Received in Lab:** Wed 07.08.2020 11:15**Report Date:** 07.10.2020 16:31**Project Manager:** Jessica Kramer

<b>Analysis Requested</b>	<b>Lab Id:</b> <b>Field Id:</b> <b>Depth:</b> <b>Matrix:</b> <b>Sampled:</b>	666538-013 FL3 @ Surface 4- ft SOIL 07.06.2020 00:00	666538-014 FL3 @ 4'-R SOIL 07.06.2020 00:00				
<b>BTEX by EPA 8021B</b>	<b>Extracted:</b> <b>Analyzed:</b> <b>Units/RL:</b>	07.08.2020 14:00 07.08.2020 21:40 mg/kg      RL	07.08.2020 14:00 07.08.2020 22:00 mg/kg      RL				
Benzene		<0.00198  0.00198	<0.00200  0.00200				
Toluene		<0.00198  0.00198	<0.00200  0.00200				
Ethylbenzene		<0.00198  0.00198	<0.00200  0.00200				
m,p-Xylenes		<0.00396  0.00396	<0.00399  0.00399				
o-Xylene		<0.00198  0.00198	<0.00200  0.00200				
Total Xylenes		<0.00198  0.00198	<0.00200  0.00200				
Total BTEX		<0.00198  0.00198	<0.00200  0.00200				
<b>Chloride by EPA 300</b>	<b>Extracted:</b> <b>Analyzed:</b> <b>Units/RL:</b>	07.09.2020 08:30 07.09.2020 11:17 mg/kg      RL	07.09.2020 08:30 07.09.2020 11:24 mg/kg      RL				
Chloride		6110      49.6	3710      50.5				
<b>TPH By SW8015 Mod</b>	<b>Extracted:</b> <b>Analyzed:</b> <b>Units/RL:</b>	07.08.2020 16:30 07.09.2020 06:30 mg/kg      RL	07.08.2020 16:30 07.09.2020 06:49 mg/kg      RL				
Gasoline Range Hydrocarbons (GRO)		<49.9  49.9	<50.0  50.0				
Diesel Range Organics (DRO)		<49.9  49.9	<50.0  50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.9  49.9	<50.0  50.0				
Total TPH		<49.9  49.9	<50.0  50.0				

BRL - Below Reporting Limit

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





Xenco

# Analytical Report 666538

for

**Etech Environmental & Safety Solution, Inc**

**Project Manager: PM**

**Berry SWD**

**12700**

**07.10.2020**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



Xenco

07.10.2020

Project Manager: **PM****Etech Environmental & Safety Solution, Inc**

P.O. Box 62228

Midland, TX 79711

Reference: Eurofins Xenco, LLC Report No(s): **666538****Berry SWD**

Project Address: Eddy County (Loving, NM)

**PM :**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 666538. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 666538 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Jessica Kramer**

Project Manager

*A Small Business and Minority Company*

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

**Sample Cross Reference 666538****Etech Environmental & Safety Solution, Inc, Midland, TX**

Berry SWD

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
NH @ Surface	S	07.06.2020 00:00		666538-001
NH @ 1'	S	07.06.2020 00:00	1 ft	666538-002
EH @ Surface	S	07.06.2020 00:00		666538-003
EH @ 1'	S	07.06.2020 00:00	1 ft	666538-004
SH @ Surface	S	07.06.2020 00:00		666538-005
SH @ 1'	S	07.06.2020 00:00	1 ft	666538-006
WH @ Surface	S	07.06.2020 00:00		666538-007
WH @ 1'	S	07.06.2020 00:00	1 ft	666538-008
FL1 @ Surface	S	07.06.2020 00:00		666538-009
FL1 @ 4'-R	S	07.06.2020 00:00	4 ft	666538-010
FL2 @ Surface	S	07.06.2020 00:00		666538-011
FL2 @ 1'	S	07.06.2020 00:00	1 ft	666538-012
FL3 @ Surface	S	07.06.2020 00:00		666538-013
FL3 @ 4'-R	S	07.06.2020 00:00	4 ft	666538-014

## CASE NARRATIVE

**Client Name: Etech Environmental & Safety Solution, Inc**

**Project Name: Berry SWD**

Project ID: 12700  
Work Order Number(s): 666538

Report Date: 07.10.2020  
Date Received: 07.08.2020

---

**Sample receipt non conformances and comments:**

---

**Sample receipt non conformances and comments per sample:**

None



Xenco

# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **NH @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-001 Date Collected: 07.06.2020 00:00  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	25.2	mg/kg	07.09.2020 10:28		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.09.2020 01:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.09.2020 01:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.09.2020 01:51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.09.2020 01:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	07.09.2020 01:51	
o-Terphenyl	84-15-1	103	%	70-130	07.09.2020 01:51	

# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: NH @ Surface

Matrix: Soil

Date Received: 07.08.2020 11:15

Lab Sample Id: 666538-001

Date Collected: 07.06.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: AMF

Date Prep: 07.08.2020 14:00

Basis: Wet Weight

Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<b>0.00666</b>	0.00199	mg/kg	07.08.2020 16:32		1
Toluene	108-88-3	<b>0.0233</b>	0.00199	mg/kg	07.08.2020 16:32		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.08.2020 16:32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.08.2020 16:32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.08.2020 16:32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.08.2020 16:32	U	1
<b>Total BTEX</b>		<b>0.0300</b>	0.00199	mg/kg	07.08.2020 16:32		1
<b>Surrogate</b>		<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene		460-00-4	93	%	70-130	07.08.2020 16:32	
1,4-Difluorobenzene		540-36-3	122	%	70-130	07.08.2020 16:32	



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: NH @ 1' Matrix: Soil Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-002 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.1	24.8	mg/kg	07.09.2020 10:33		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.09.2020 02:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.09.2020 02:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.09.2020 02:48	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.09.2020 02:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	111	%	70-130	07.09.2020 02:48		
o-Terphenyl	84-15-1	118	%	70-130	07.09.2020 02:48		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: NH @ 1' Matrix: Soil Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-002 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.08.2020 16:52	U	1
Toluene	108-88-3	<b>0.00218</b>	0.00199	mg/kg	07.08.2020 16:52		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.08.2020 16:52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.08.2020 16:52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.08.2020 16:52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.08.2020 16:52	U	1
<b>Total BTEX</b>		<b>0.00218</b>	0.00199	mg/kg	07.08.2020 16:52		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	07.08.2020 16:52		
1,4-Difluorobenzene	540-36-3	116	%	70-130	07.08.2020 16:52		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **EH @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-003 Date Collected: 07.06.2020 00:00  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>111</b>	25.3	mg/kg	07.09.2020 10:48		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.09.2020 03:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.09.2020 03:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.09.2020 03:06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.09.2020 03:06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-130	07.09.2020 03:06		
o-Terphenyl	84-15-1	113	%	70-130	07.09.2020 03:06		

# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: EH @ Surface

Matrix: Soil

Date Received: 07.08.2020 11:15

Lab Sample Id: 666538-003

Date Collected: 07.06.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: AMF

Date Prep: 07.08.2020 14:00

Basis: Wet Weight

Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<b>0.00662</b>	0.00200	mg/kg	07.08.2020 17:13		1
Toluene	108-88-3	<b>0.0231</b>	0.00200	mg/kg	07.08.2020 17:13		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 17:13	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.08.2020 17:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 17:13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 17:13	U	1
<b>Total BTEX</b>		<b>0.0297</b>	0.00200	mg/kg	07.08.2020 17:13		1
<b>Surrogate</b>							
1,4-Difluorobenzene	540-36-3	116	%	70-130	07.08.2020 17:13		
4-Bromofluorobenzene	460-00-4	97	%	70-130	07.08.2020 17:13		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **EH @ 1'** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-004 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>175</b>	25.3	mg/kg	07.09.2020 10:53		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.09.2020 03:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.09.2020 03:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.09.2020 03:25	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.09.2020 03:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-130	07.09.2020 03:25		
o-Terphenyl	84-15-1	111	%	70-130	07.09.2020 03:25		

# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **EH @ 1'** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-004 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<b>0.00574</b>	0.00200	mg/kg	07.08.2020 17:33		1
Toluene	108-88-3	<b>0.0180</b>	0.00200	mg/kg	07.08.2020 17:33		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 17:33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.08.2020 17:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 17:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 17:33	U	1
<b>Total BTEX</b>		<b>0.0237</b>	0.00200	mg/kg	07.08.2020 17:33		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	07.08.2020 17:33		
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.08.2020 17:33		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: SH @ Surface      Matrix: Soil      Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-005      Date Collected: 07.06.2020 00:00  
 Analytical Method: Chloride by EPA 300      Prep Method: E300P  
 Tech: CHE      % Moisture:  
 Analyst: CHE      Date Prep: 07.09.2020 08:15      Basis: Wet Weight  
 Seq Number: 3131210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	118	25.3	mg/kg	07.09.2020 10:58		5

Analytical Method: TPH By SW8015 Mod      Prep Method: SW8015P  
 Tech: DVM      % Moisture:  
 Analyst: ARM      Date Prep: 07.08.2020 16:30      Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.09.2020 03:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.09.2020 03:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.09.2020 03:44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.09.2020 03:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	07.09.2020 03:44	
o-Terphenyl	84-15-1	115	%	70-130	07.09.2020 03:44	



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: SH @ Surface

Matrix: Soil

Date Received: 07.08.2020 11:15

Lab Sample Id: 666538-005

Date Collected: 07.06.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: AMF

Date Prep: 07.08.2020 14:00

Basis: Wet Weight

Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<b>0.00707</b>	0.00201	mg/kg	07.08.2020 17:54		1
Toluene	108-88-3	<b>0.0204</b>	0.00201	mg/kg	07.08.2020 17:54		1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.2020 17:54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.2020 17:54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.2020 17:54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.2020 17:54	U	1
<b>Total BTEX</b>		<b>0.0275</b>	0.00201	mg/kg	07.08.2020 17:54		1
<b>Surrogate</b>		<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene		460-00-4	99	%	70-130	07.08.2020 17:54	
1,4-Difluorobenzene		540-36-3	113	%	70-130	07.08.2020 17:54	



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: SH @ 1' Matrix: Soil Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-006 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.9	25.0	mg/kg	07.09.2020 11:03		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.09.2020 04:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.09.2020 04:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.09.2020 04:03	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.09.2020 04:03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	119	%	70-130	07.09.2020 04:03		
o-Terphenyl	84-15-1	128	%	70-130	07.09.2020 04:03		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: SH @ 1' Matrix: Soil Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-006 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<b>0.00547</b>	0.00200	mg/kg	07.08.2020 18:14		1
Toluene	108-88-3	<b>0.0173</b>	0.00200	mg/kg	07.08.2020 18:14		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 18:14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.08.2020 18:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 18:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 18:14	U	1
<b>Total BTEX</b>		<b>0.0228</b>	0.00200	mg/kg	07.08.2020 18:14		1
<b>Surrogate</b>							
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.08.2020 18:14		
1,4-Difluorobenzene	540-36-3	110	%	70-130	07.08.2020 18:14		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **WH @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-007 Date Collected: 07.06.2020 00:00  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>116</b>	25.0	mg/kg	07.09.2020 11:08		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.09.2020 04:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.09.2020 04:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.09.2020 04:21	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.09.2020 04:21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-130	07.09.2020 04:21		
o-Terphenyl	84-15-1	109	%	70-130	07.09.2020 04:21		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **WH @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-007 Date Collected: 07.06.2020 00:00  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.2020 18:35	U	1
Toluene	108-88-3	<b>0.00455</b>	0.00200	mg/kg	07.08.2020 18:35		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 18:35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.08.2020 18:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 18:35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 18:35	U	1
<b>Total BTEX</b>		<b>0.00455</b>	0.00200	mg/kg	07.08.2020 18:35		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	07.08.2020 18:35		
1,4-Difluorobenzene	540-36-3	110	%	70-130	07.08.2020 18:35		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **WH @ 1'** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-008 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>65.6</b>	25.2	mg/kg	07.09.2020 11:13		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136 Date Prep: 07.08.2020 16:30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.09.2020 04:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.09.2020 04:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.09.2020 04:40	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.09.2020 04:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-130	07.09.2020 04:40		
o-Terphenyl	84-15-1	117	%	70-130	07.09.2020 04:40		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **WH @ 1'** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-008 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Benzene</b>	71-43-2	<b>0.00411</b>	0.00202	mg/kg	07.08.2020 18:55		1
<b>Toluene</b>	108-88-3	<b>0.0120</b>	0.00202	mg/kg	07.08.2020 18:55		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.08.2020 18:55	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.08.2020 18:55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.08.2020 18:55	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.08.2020 18:55	U	1
<b>Total BTEX</b>		<b>0.0161</b>	0.00202	mg/kg	07.08.2020 18:55		1
<b>Surrogate</b>							
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.08.2020 18:55		
1,4-Difluorobenzene	540-36-3	114	%	70-130	07.08.2020 18:55		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL1 @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-009 Date Collected: 07.06.2020 00:00  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131210

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3300	24.9	mg/kg	07.09.2020 11:18		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.09.2020 04:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.09.2020 04:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.09.2020 04:58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.09.2020 04:58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	112	%	70-130	07.09.2020 04:58		
o-Terphenyl	84-15-1	119	%	70-130	07.09.2020 04:58		

# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL1 @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-009 Date Collected: 07.06.2020 00:00  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.08.2020 19:16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.08.2020 19:16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.08.2020 19:16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.08.2020 19:16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.08.2020 19:16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.08.2020 19:16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.08.2020 19:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	115	%	70-130	07.08.2020 19:16		
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.08.2020 19:16		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL1 @ 4'-R** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-010 Date Collected: 07.06.2020 00:00 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>1590</b>	25.0	mg/kg	07.09.2020 10:46		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136 Date Prep: 07.08.2020 16:30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.09.2020 05:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.09.2020 05:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.09.2020 05:17	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.09.2020 05:17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	110	%	70-130	07.09.2020 05:17		
o-Terphenyl	84-15-1	117	%	70-130	07.09.2020 05:17		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL1 @ 4'-R** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-010 Date Collected: 07.06.2020 00:00 Sample Depth: 4 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.2020 19:37	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.2020 19:37	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.2020 19:37	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.2020 19:37	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.2020 19:37	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.2020 19:37	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.2020 19:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	07.08.2020 19:37		
4-Bromofluorobenzene	460-00-4	98	%	70-130	07.08.2020 19:37		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL2 @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-011 Date Collected: 07.06.2020 00:00  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>1570</b>	50.2	mg/kg	07.09.2020 11:05		10

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.09.2020 05:54	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>238</b>	49.8	mg/kg	07.09.2020 05:54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<b>81.2</b>	49.8	mg/kg	07.09.2020 05:54		1
<b>Total TPH</b>	PHC635	<b>319</b>	49.8	mg/kg	07.09.2020 05:54		1
<b>Surrogate</b>							
1-Chlorooctane	111-85-3	106	%	70-130	07.09.2020 05:54		
o-Terphenyl	84-15-1	118	%	70-130	07.09.2020 05:54		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL2 @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-011 Date Collected: 07.06.2020 00:00  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<b>0.00869</b>	0.00201	mg/kg	07.08.2020 20:59		1
Toluene	108-88-3	<b>0.0236</b>	0.00201	mg/kg	07.08.2020 20:59		1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.2020 20:59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.2020 20:59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.2020 20:59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.2020 20:59	U	1
<b>Total BTEX</b>		<b>0.0323</b>	0.00201	mg/kg	07.08.2020 20:59		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.08.2020 20:59		
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.08.2020 20:59		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL2 @ 1'** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-012 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b>	16887-00-6	<b>364</b>	25.0	mg/kg	07.09.2020 11:11		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.09.2020 06:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.09.2020 06:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.09.2020 06:12	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.09.2020 06:12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-130	07.09.2020 06:12		
o-Terphenyl	84-15-1	105	%	70-130	07.09.2020 06:12		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL2 @ 1'** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-012 Date Collected: 07.06.2020 00:00 Sample Depth: 1 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<b>0.00621</b>	0.00201	mg/kg	07.08.2020 21:19		1
Toluene	108-88-3	<b>0.0173</b>	0.00201	mg/kg	07.08.2020 21:19		1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.2020 21:19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.2020 21:19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.2020 21:19	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.2020 21:19	U	1
<b>Total BTEX</b>		<b>0.0235</b>	0.00201	mg/kg	07.08.2020 21:19		1
<b>Surrogate</b>							
4-Bromofluorobenzene	460-00-4	97	%	70-130	07.08.2020 21:19		
1,4-Difluorobenzene	540-36-3	111	%	70-130	07.08.2020 21:19		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL3 @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-013 Date Collected: 07.06.2020 00:00  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6110	49.6	mg/kg	07.09.2020 11:17		10

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.09.2020 06:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.09.2020 06:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.09.2020 06:30	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.09.2020 06:30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-130	07.09.2020 06:30		
o-Terphenyl	84-15-1	115	%	70-130	07.09.2020 06:30		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL3 @ Surface** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-013 Date Collected: 07.06.2020 00:00  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.08.2020 21:40	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.08.2020 21:40	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.08.2020 21:40	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.08.2020 21:40	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.08.2020 21:40	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.08.2020 21:40	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.08.2020 21:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.08.2020 21:40		
1,4-Difluorobenzene	540-36-3	113	%	70-130	07.08.2020 21:40		



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# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL3 @ 4'-R** Matrix: Soil Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-014 Date Collected: 07.06.2020 00:00 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Basis: Wet Weight  
 Seq Number: 3131215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3710	50.5	mg/kg	07.09.2020 11:24		10

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Basis: Wet Weight  
 Seq Number: 3131136 Date Prep: 07.08.2020 16:30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.09.2020 06:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.09.2020 06:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.09.2020 06:49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.09.2020 06:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	07.09.2020 06:49	
o-Terphenyl	84-15-1	119	%	70-130	07.09.2020 06:49	

# Certificate of Analytical Results 666538

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: **FL3 @ 4'-R** Matrix: **Soil** Date Received: 07.08.2020 11:15  
 Lab Sample Id: 666538-014 Date Collected: 07.06.2020 00:00 Sample Depth: 4 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: KTL % Moisture:  
 Analyst: AMF Date Prep: 07.08.2020 14:00 Basis: Wet Weight  
 Seq Number: 3131097

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.2020 22:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.08.2020 22:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.2020 22:00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.08.2020 22:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.2020 22:00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.2020 22:00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.08.2020 22:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.08.2020 22:00		
1,4-Difluorobenzene	540-36-3	116	%	70-130	07.08.2020 22:00		

## Flagging Criteria

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

\*\* Surrogate recovered outside laboratory control limit.

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

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK**      Method Blank

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

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

+ NELAC certification not offered for this compound.

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

# Etech Environmental & Safety Solution, Inc

## Berry SWD

**Analytical Method: Chloride by EPA 300**

Seq Number: 3131210

MB Sample Id: 7706987-1-BLK

Matrix: Solid

LCS Sample Id: 7706987-1-BKS

Prep Method: E300P

Date Prep: 07.09.2020

LCSD Sample Id: 7706987-1-BSD

**Parameter**

Chloride

MB Result

&lt;5.00

Spike Amount

250

LCS Result

258

LCS %Rec

103

LCSD Result

258

LCSD %Rec

103

Limits

90-110

%RPD

0

RPD Limit

20

Units

mg/kg

Analysis Date

07.09.2020 08:52

Flag

**Analytical Method: Chloride by EPA 300**

Seq Number: 3131215

MB Sample Id: 7706988-1-BLK

Matrix: Solid

LCS Sample Id: 7706988-1-BKS

Prep Method: E300P

Date Prep: 07.09.2020

LCSD Sample Id: 7706988-1-BSD

**Parameter**

Chloride

MB Result

&lt;5.00

Spike Amount

250

LCS Result

245

LCS %Rec

98

LCSD Result

246

LCSD %Rec

98

Limits

90-110

%RPD

0

RPD Limit

20

Units

mg/kg

Analysis Date

07.09.2020 10:33

Flag

**Analytical Method: Chloride by EPA 300**

Seq Number: 3131210

Parent Sample Id: 666529-012

Matrix: Soil

MS Sample Id: 666529-012 S

Prep Method: E300P

Date Prep: 07.09.2020

MSD Sample Id: 666529-012 SD

**Parameter**

Chloride

Parent Result

161

Spike Amount

248

MS Result

427

MS %Rec

107

MSD Result

421

MSD %Rec

105

Limits

90-110

%RPD

1

RPD Limit

20

Units

mg/kg

Analysis Date

07.09.2020 09:07

Flag

**Analytical Method: Chloride by EPA 300**

Seq Number: 3131210

Parent Sample Id: 666529-022

Matrix: Soil

MS Sample Id: 666529-022 S

Prep Method: E300P

Date Prep: 07.09.2020

MSD Sample Id: 666529-022 SD

**Parameter**

Chloride

Parent Result

224

Spike Amount

250

MS Result

486

MS %Rec

105

MSD Result

487

MSD %Rec

105

Limits

90-110

%RPD

0

RPD Limit

20

Units

mg/kg

Analysis Date

07.09.2020 10:18

Flag

**Analytical Method: Chloride by EPA 300**

Seq Number: 3131215

Parent Sample Id: 666538-010

Matrix: Soil

MS Sample Id: 666538-010 S

Prep Method: E300P

Date Prep: 07.09.2020

MSD Sample Id: 666538-010 SD

**Parameter**

Chloride

Parent Result

1590

Spike Amount

1250

MS Result

2960

MS %Rec

110

MSD Result

2950

MSD %Rec

109

Limits

90-110

%RPD

0

RPD Limit

20

Units

mg/kg

Analysis Date

07.09.2020 10:52

Flag

**Analytical Method: Chloride by EPA 300**

Seq Number: 3131215

Parent Sample Id: 666539-006

Matrix: Soil

MS Sample Id: 666539-006 S

Prep Method: E300P

Date Prep: 07.09.2020

MSD Sample Id: 666539-006 SD

**Parameter**

Chloride

Parent Result

5.27

Spike Amount

248

MS Result

263

MS %Rec

104

MSD Result

263

MSD %Rec

104

Limits

90-110

%RPD

0

RPD Limit

20

Units

mg/kg

Analysis Date

07.09.2020 12:21

Flag

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

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

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

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

# Etech Environmental & Safety Solution, Inc

## Berry SWD

**Analytical Method:** TPH By SW8015 Mod

Seq Number: 3131136

MB Sample Id: 7706973-1-BLK

Matrix: Solid

LCS Sample Id: 7706973-1-BKS

Prep Method: SW8015P

Date Prep: 07.08.2020

LCSD Sample Id: 7706973-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1090	109	1100	110	70-130	1	20	mg/kg	07.09.2020 01:13	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1110	111	70-130	0	20	mg/kg	07.09.2020 01:13	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane	107		126		127		70-130			%	07.09.2020 01:13	
o-Terphenyl	115		120		121		70-130			%	07.09.2020 01:13	

**Analytical Method:** TPH By SW8015 Mod

Seq Number: 3131136

Matrix: Solid

MB Sample Id: 7706973-1-BLK

Prep Method: SW8015P

Date Prep: 07.08.2020

Parameter	MB Result						Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0						mg/kg	07.09.2020 00:54	

**Analytical Method:** TPH By SW8015 Mod

Seq Number: 3131136

Matrix: Soil

Parent Sample Id: 666538-001

MS Sample Id: 666538-001 S

Prep Method: SW8015P

Date Prep: 07.08.2020

MSD Sample Id: 666538-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	975	98	954	95	70-130	2	20	mg/kg	07.09.2020 02:10	
Diesel Range Organics (DRO)	<49.8	996	997	100	987	99	70-130	1	20	mg/kg	07.09.2020 02:10	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			126		125		70-130			%	07.09.2020 02:10	
o-Terphenyl			120		117		70-130			%	07.09.2020 02:10	

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 3131097

MB Sample Id: 7706926-1-BLK

Matrix: Solid

LCS Sample Id: 7706926-1-BKS

Prep Method: SW5035A

Date Prep: 07.08.2020

LCSD Sample Id: 7706926-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.119	119	0.114	114	70-130	4	35	mg/kg	07.08.2020 14:28	
Toluene	<0.00200	0.100	0.101	101	0.0992	99	70-130	2	35	mg/kg	07.08.2020 14:28	
Ethylbenzene	<0.00200	0.100	0.0956	96	0.0935	94	70-130	2	35	mg/kg	07.08.2020 14:28	
m,p-Xylenes	<0.00400	0.200	0.180	90	0.177	89	70-130	2	35	mg/kg	07.08.2020 14:28	
o-Xylene	<0.00200	0.100	0.0888	89	0.0886	89	70-130	0	35	mg/kg	07.08.2020 14:28	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	110		101		99		70-130			%	07.08.2020 14:28	
4-Bromofluorobenzene	87		83		85		70-130			%	07.08.2020 14:28	

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

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

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

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

**Etech Environmental & Safety Solution, Inc**  
Berry SWD

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 3131097

Parent Sample Id: 666538-001

Matrix: Soil

MS Sample Id: 666538-001 S

Prep Method: SW5035A

Date Prep: 07.08.2020

MSD Sample Id: 666538-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00666	0.0996	0.127	121	0.132	125	70-130	4	35	mg/kg	07.08.2020 15:09	
Toluene	0.0233	0.0996	0.111	88	0.119	96	70-130	7	35	mg/kg	07.08.2020 15:09	
Ethylbenzene	<0.00199	0.0996	0.0859	86	0.0880	88	70-130	2	35	mg/kg	07.08.2020 15:09	
m,p-Xylenes	<0.00398	0.199	0.164	82	0.165	82	70-130	1	35	mg/kg	07.08.2020 15:09	
o-Xylene	<0.00199	0.0996	0.0813	82	0.0822	82	70-130	1	35	mg/kg	07.08.2020 15:09	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene			106		104		70-130			%	07.08.2020 15:09	
4-Bromofluorobenzene			84		82		70-130			%	07.08.2020 15:09	

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

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

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

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

Ref: Date: 07-JUL-20 SHIPPING: 0.00  
 Wgt: 36.00 LBS SPECIAL: 0.00  
 Dep: HANDLING: 0.00  
 DV: TOTAL: 0.00

Svcs: STANDARD OVERNIGHT HLD  
 TRCK: 4705 2523 9423

AKO, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334  
 Midland, TX (432) 704-5440, El Paso, TX (915) 583-3443, Lubbock, TX (806) 794-1296

Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3198, Phoenix, AZ (480) 355-0900  
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701

Atlanta, GA (770) 449-8800

## In of Custody

Work Order No: W00536

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Project Name:	Berry SWD	Turn Around	ANALYSIS REQUEST												Preservative Codes
Project Manager:	Joel Lowry		Bill to: (if different)												
Company Name:	Etech Environmental & Safety		Company Name:	Solaris											
Address:	3100 Plains Highway		Address:												
City, State ZIP:	Lovington, NM, 88260		City, State ZIP:												
Phone:	575-396-2378		Email:	Email Results to PM@eletechenv.com + Client											

Work Order Comments															
Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRRC <input type="checkbox"/> Superfund <input type="checkbox"/>															
State of Project:															
Reporting Level: <input type="checkbox"/> Level I <input type="checkbox"/> PST/US <input type="checkbox"/> TRR <input type="checkbox"/> Level II <input type="checkbox"/> Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____															

Number of Containers/Preservative Code

Chloride E300

BTEX 8Q21

TPH Modified Ext

TPH TX1005

TAT starts the day received by the

lab, if received by 4:30pm

Sample Comments

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	NH <sub>3</sub> Surface	Seal	7-6-20	1'	1'	X	X	X	X	X	X	HNO <sub>3</sub> : HN
NH <sub>3</sub> Surface	Soil	7-6-20		1'	X	X										H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub>
EHC Surface	Soil	7-6-20		1'	X	X										HCl: HL
EHC@1'	Soil	7-6-20		1'	X	X										None: NO
GHC@Surface	Soil	7-6-20		1'	X	X										NaOH: Na
JH@1'	Soil	7-6-20		1'	X	X										MeOH: Me
JH@ Surface	Soil	7-6-20		1'	X	X										Zn Acetate, NaOH: Zn
JH@1'	Soil	7-6-20		1'	X	X										TAT starts the day received by the
JH@ Surface	Soil	7-6-20		1'	X	X										lab, if received by 4:30pm
FL@ Surface	Soil	7-6-20		1'	X	X										Sample Comments
FL@ 4' R	Soil	7-6-20		4' R	X	X										

Total 20.7 / 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 SiO<sub>2</sub> Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed: TCLP / SPLP 6010: 8RCRA SB As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631/2451/17470/17471:Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

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

John Lowry John Lowry 7-6-21 John Lowry 7-6-21



## Chain of Custody

Work Order No: W00558

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 569-3334  
 Midland, TX (432) 704-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296  
 Hobbs, NM (575) 392-7750, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900  
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701  
 Atlanta, GA (770) 449-8800

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Project Manager:	Joel Lowry	Bill to: (if different)	
Company Name:	Etech Environmental & Safety	Company Name:	Solaris
Address:	3100 Plains Highway	Address:	
City, State ZIP:	Lovington, NM, 88260	City, State ZIP:	
Phone:	575-396-2378	Email:	Email Results to PM@etechenvy.com + Client

<b>ANALYSIS REQUEST</b>			
Preservative Codes			
HNO3: HN H2SO4: H2 HCl: HL None: NO NaOH: Na MeOH: Me Zn Acetate+ NaOH: Zn TAT starts the day received by the lab, if received by 4:30pm			
<b>Sample Comments</b>			

Number of Containers/Preservative				
<b>SAMPLE RECEIPT</b>	Temp Blank:	Yes ( <input checked="" type="checkbox"/> )	Wet Ice: ( <input checked="" type="checkbox"/> ) Yes	No
Temperature (°C):	23	1.9	Thermometer ID: J28	
Received Intact:	Yes	No	Correction Factor: .904	
Cooler Custody Seals:	Yes	No	Total Containers: N/A	
Sample Custody Seals:				
<b>Sample Identification</b>	Matrix	Date Sampled	Time Sampled	Depth
FL 2 <input checked="" type="checkbox"/> Surface	Soil	7-6-20	1'	1' <input checked="" type="checkbox"/>
FL 1 <input checked="" type="checkbox"/> Soil	Soil	7-6-20	1'	1' <input checked="" type="checkbox"/>
FL 3 <input checked="" type="checkbox"/> Surface	Soil	7-6-20	4' R	1' <input checked="" type="checkbox"/>
FL 3 <input checked="" type="checkbox"/> 4' R	Soil	7-6-20		

Total 200.7 / 60.10    200.8 / 6020:    8RCRA 13PPM Texas 11 Al Si As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO<sub>2</sub> Na Sr Ti Sn U V Zn  
 Circle Method(s) and Metal(s) to be analyzed    TCLP / SPLP 6010: 8RCRA SG As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U  
 1631/245.1 / 7470 / 7471: Hg

**Notice:** Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$15.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time
<i>John P.</i>	<i>J. D. D.</i>	7-6-2020	<i>John P.</i>	7-6-2020



## Prelogin/Nonconformance Report- Sample Log-In

**Client:** Etech Environmental & Safety Solution, I  
**Date/ Time Received:** 07.08.2020 11.15.00 AM  
**Work Order #:** 666538

Acceptable Temperature Range: 0 - 6 degC  
Air and Metal samples Acceptable Range: Ambient  
Temperature Measuring device used : IR-8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#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: 07.08.2020

Checklist reviewed by:

  
Jessica Kramer

Date: 07.09.2020

# Certificate of Analysis Summary 673500

## Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Berry SWD

**Project Id:** 12700  
**Contact:** PM  
**Project Location:** Eddy County, New Mexico

**Date Received in Lab:** Thu 09.24.2020 13:12  
**Report Date:** 09.28.2020 13:42  
**Project Manager:** Jessica Kramer

<b>Analysis Requested</b>		<b>Lab Id:</b> 673500-001	<b>Field Id:</b> STT @ 5'	<b>Depth:</b> 5- ft	<b>Matrix:</b> SOIL			
		<b>Sampled:</b> 09.24.2020 00:00			<b>Sampled:</b> 09.24.2020 00:00			
<b>BTEX by EPA 8021B</b>		<b>Extracted:</b> 09.25.2020 15:39	09.25.2020 15:39					
		<b>Analyzed:</b> 09.26.2020 10:38	09.26.2020 11:01					
		<b>Units/RL:</b> mg/kg	RL		<b>Units/RL:</b> mg/kg	RL		
Benzene		<0.00200	0.00200		<0.00196	0.00196		
Toluene		<0.00200	0.00200		<0.00196	0.00196		
Ethylbenzene		<0.00200	0.00200		<0.00196	0.00196		
m,p-Xylenes		<0.00399	0.00399		<0.00392	0.00392		
o-Xylene		<0.00200	0.00200		<0.00196	0.00196		
Total Xylenes		<0.00200	0.00200		<0.00196	0.00196		
Total BTEX		<0.00200	0.00200		<0.00196	0.00196		
<b>Inorganic Anions by EPA 300</b>		<b>Extracted:</b> 09.25.2020 11:13	09.25.2020 11:13					
		<b>Analyzed:</b> 09.25.2020 14:40	09.25.2020 14:45					
		<b>Units/RL:</b> mg/kg	RL		<b>Units/RL:</b> mg/kg	RL		
Chloride		158	10.0		362	9.98		
<b>TPH by SW8015 Mod</b>		<b>Extracted:</b> 09.25.2020 12:00	09.25.2020 12:00					
		<b>Analyzed:</b> 09.25.2020 15:42	09.25.2020 16:02					
		<b>Units/RL:</b> mg/kg	RL		<b>Units/RL:</b> mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8		<49.9	49.9		
Diesel Range Organics (DRO)		<49.8	49.8		<49.9	49.9		
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8		<49.9	49.9		
Total TPH		<49.8	49.8		<49.9	49.9		

BRL - Below Reporting Limit

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



# Analytical Report 673500

for

**Etech Environmental & Safety Solution, Inc**

**Project Manager: PM**

**Berry SWD**

**12700**

**09.28.2020**

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



09.28.2020

Project Manager: **PM**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 62228  
Midland, TX 79711

Reference: Eurofins Xenco, LLC Report No(s): **673500**

**Berry SWD**

Project Address: Eddy County, New Mexico

**PM :**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 673500. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 673500 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads "jessica kramer".

---

**Jessica Kramer**  
Project Manager

*A Small Business and Minority Company*

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

**Sample Cross Reference 673500****Etech Environmental & Safety Solution, Inc, Midland, TX**

Berry SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
STT @5'	S	09.24.2020 00:00	5 ft	673500-001
NTT @5'	S	09.24.2020 00:00	5 ft	673500-002

## CASE NARRATIVE

**Client Name: Etech Environmental & Safety Solution, Inc**

**Project Name: Berry SWD**

Project ID: 12700  
Work Order Number(s): 673500

Report Date: 09.28.2020  
Date Received: 09.24.2020

---

**Sample receipt non conformances and comments:**

---

**Sample receipt non conformances and comments per sample:**

None

# Certificate of Analytical Results 673500

## Etech Environmental & Safety Solution, Inc, Midland, TX

Berry SWD

Sample Id: **STT @5'** Matrix: **Soil** Date Received: 09.24.2020 13:12  
 Lab Sample Id: 673500-001 Date Collected: 09.24.2020 00:00 Sample Depth: 5 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Basis: Wet Weight  
 Seq Number: 3138166

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>158</b>	10.0	mg/kg	09.25.2020 14:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Basis: Wet Weight  
 Seq Number: 3138163

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	09.25.2020 15:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	09.25.2020 15:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.25.2020 15:42	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.25.2020 15:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	114	%	70-135	09.25.2020 15:42		
o-Terphenyl	84-15-1	113	%	70-135	09.25.2020 15:42		

# Certificate of Analytical Results 673500

## Etech Environmental & Safety Solution, Inc, Midland, TX

Berry SWD

Sample Id: STT @5' Matrix: Soil Date Received:09.24.2020 13:12  
 Lab Sample Id: 673500-001 Date Collected: 09.24.2020 00:00 Sample Depth: 5 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: MAB % Moisture:  
 Analyst: MAB Basis: Wet Weight  
 Seq Number: 3138238

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.26.2020 10:38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.26.2020 10:38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.26.2020 10:38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.26.2020 10:38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.26.2020 10:38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.26.2020 10:38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.26.2020 10:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	09.26.2020 10:38		
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.26.2020 10:38		

# Certificate of Analytical Results 673500

## Etech Environmental & Safety Solution, Inc, Midland, TX

Berry SWD

Sample Id: NTT @5' Matrix: Soil Date Received:09.24.2020 13:12  
 Lab Sample Id: 673500-002 Date Collected: 09.24.2020 00:00 Sample Depth: 5 ft  
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Basis: Wet Weight  
 Seq Number: 3138166

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	362	9.98	mg/kg	09.25.2020 14:45		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Basis: Wet Weight  
 Seq Number: 3138163

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.25.2020 16:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.25.2020 16:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.25.2020 16:02	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.25.2020 16:02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	113	%	70-135	09.25.2020 16:02		
o-Terphenyl	84-15-1	115	%	70-135	09.25.2020 16:02		

# Certificate of Analytical Results 673500

## Etech Environmental & Safety Solution, Inc, Midland, TX Berry SWD

Sample Id: NTT @5' Matrix: Soil Date Received:09.24.2020 13:12  
 Lab Sample Id: 673500-002 Date Collected: 09.24.2020 00:00 Sample Depth: 5 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A  
 Tech: MAB % Moisture:  
 Analyst: MAB Basis: Wet Weight  
 Seq Number: 3138238

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00196	0.00196	mg/kg	09.26.2020 11:01	U	1
Toluene	108-88-3	<0.00196	0.00196	mg/kg	09.26.2020 11:01	U	1
Ethylbenzene	100-41-4	<0.00196	0.00196	mg/kg	09.26.2020 11:01	U	1
m,p-Xylenes	179601-23-1	<0.00392	0.00392	mg/kg	09.26.2020 11:01	U	1
o-Xylene	95-47-6	<0.00196	0.00196	mg/kg	09.26.2020 11:01	U	1
Total Xylenes	1330-20-7	<0.00196	0.00196	mg/kg	09.26.2020 11:01	U	1
Total BTEX		<0.00196	0.00196	mg/kg	09.26.2020 11:01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.26.2020 11:01		
4-Bromofluorobenzene	460-00-4	121	%	70-130	09.26.2020 11:01		

## Flagging Criteria

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

\*\* Surrogate recovered outside laboratory control limit.

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

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK**      Method Blank

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

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

+ NELAC certification not offered for this compound.

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



# Etech Environmental & Safety Solution, Inc

## Berry SWD

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number:	3138166	Matrix: Solid				Prep Method: E300P			
MB Sample Id:	7712105-1-BLK	LCS Sample Id: 7712105-1-BKS				Date Prep: 09.25.2020			
<b>Parameter</b>	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit
Chloride	<10.0	250	255	102	255	102	90-110	0	20
								mg/kg	09.25.2020 10:39

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number:	3138166	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	673561-011	MS Sample Id: 673561-011 S				Date Prep: 09.25.2020			
<b>Parameter</b>	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit
Chloride	223	200	418	98	422	100	90-110	1	20
								mg/kg	09.25.2020 13:55

**Analytical Method: Inorganic Anions by EPA 300**

Seq Number:	3138166	Matrix: Soil				Prep Method: E300P			
Parent Sample Id:	673561-001	MS Sample Id: 673561-001 S				Date Prep: 09.25.2020			
<b>Parameter</b>	Parent Result	Spike Amount	MS Result	MS %Rec	Limits			Units	Analysis Date
Chloride	264	200	471	104	90-110			mg/kg	09.25.2020 12:37

**Analytical Method: TPH by SW8015 Mod**

Seq Number:	3138163	Matrix: Solid				Prep Method: SW8015P			
MB Sample Id:	7712083-1-BLK	LCS Sample Id: 7712083-1-BKS				Date Prep: 09.25.2020			
<b>Parameter</b>	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1250	125	974	97	70-135	25	35
Diesel Range Organics (DRO)	<50.0	1000	913	91	956	96	70-135	5	35
<b>Surrogate</b>	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		134		133		70-135	%	09.25.2020 10:19
o-Terphenyl	92		126		123		70-135	%	09.25.2020 10:19

**Analytical Method: TPH by SW8015 Mod**

Seq Number:	3138163	Matrix: Solid				Prep Method: SW8015P			
MB Sample Id:	7712083-1-BLK	MB Sample Id: 7712083-1-BLK				Date Prep: 09.25.2020			
<b>Parameter</b>	MB Result						Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0						mg/kg	09.25.2020 09:59	

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

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

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

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



## QC Summary 673500

Etech Environmental & Safety Solution, Inc  
Berry SWD**Analytical Method:** TPH by SW8015 Mod

Seq Number:	3138163	Matrix: Soil						Prep Method: SW8015P			
Parent Sample Id:	673493-001	MS Sample Id: 673493-001 S						Date Prep: 09.25.2020			
<b>Parameter</b>	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Gasoline Range Hydrocarbons (GRO)	<49.8	996	998	100	981	98	70-135	2	35	mg/kg	09.25.2020 11:19
Diesel Range Organics (DRO)	<49.8	996	992	100	955	96	70-135	4	35	mg/kg	09.25.2020 11:19
<b>Surrogate</b>			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits		Units	Analysis Date	
1-Chlorooctane			134		130		70-135		%	09.25.2020 11:19	
o-Terphenyl			130		125		70-135		%	09.25.2020 11:19	

**Analytical Method:** BTEX by EPA 8021B

Seq Number:	3138238	Matrix: Solid						Prep Method: SW5035A			
MB Sample Id:	7712176-1-BLK	LCS Sample Id: 7712176-1-BKS						Date Prep: 09.25.2020			
<b>Parameter</b>	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	<0.00200	0.100	0.0987	99	0.103	103	70-130	4	35	mg/kg	09.26.2020 02:44
Toluene	<0.00200	0.100	0.0947	95	0.0973	97	70-130	3	35	mg/kg	09.26.2020 02:44
Ethylbenzene	<0.00200	0.100	0.0976	98	0.101	101	71-129	3	35	mg/kg	09.26.2020 02:44
m,p-Xylenes	<0.00400	0.200	0.197	99	0.201	101	70-135	2	35	mg/kg	09.26.2020 02:44
o-Xylene	<0.00200	0.100	0.0986	99	0.0988	99	71-133	0	35	mg/kg	09.26.2020 02:44
<b>Surrogate</b>	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits		Units	Analysis Date	
1,4-Difluorobenzene	102		99		102		70-130		%	09.26.2020 02:44	
4-Bromofluorobenzene	115		109		109		70-130		%	09.26.2020 02:44	

**Analytical Method:** BTEX by EPA 8021B

Seq Number:	3138238	Matrix: Soil						Prep Method: SW5035A			
Parent Sample Id:	673428-008	MS Sample Id: 673428-008 S						Date Prep: 09.25.2020			
<b>Parameter</b>	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	<0.00201	0.100	0.105	105	0.0983	98	70-130	7	35	mg/kg	09.26.2020 03:29
Toluene	<0.00201	0.100	0.0978	98	0.0878	88	70-130	11	35	mg/kg	09.26.2020 03:29
Ethylbenzene	<0.00201	0.100	0.105	105	0.0900	90	71-129	15	35	mg/kg	09.26.2020 03:29
m,p-Xylenes	<0.00402	0.201	0.210	104	0.180	90	70-135	15	35	mg/kg	09.26.2020 03:29
o-Xylene	<0.00201	0.100	0.104	104	0.0904	90	71-133	14	35	mg/kg	09.26.2020 03:29
<b>Surrogate</b>			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits		Units	Analysis Date	
1,4-Difluorobenzene			101		96		70-130		%	09.26.2020 03:29	
4-Bromofluorobenzene			114		111		70-130		%	09.26.2020 03:29	

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

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

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

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



## Chain of Custody

Work Order No.: 673500

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 529-3334  
 Midland, TX (432) 704-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296  
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900  
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701  
 Atlanta, GA (770) 449-8800

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Page 1 of 1

### Work Order Comments

Program: UST/PST  PRP  Brownfields  RRC  Superfund

State of Project:

Reporting Level  Level I  · PST/UST  TRR  Level II

Deliverables: EDD  ADApt  Other: \_\_\_\_\_

Project Manager:	Joel Lowry	Bill to: (if different)	
Company Name:	Etech Environmental & Safety	Company Name:	Solanis Water Midstream
Address:	3100 Plains Highway	Address:	
City, State ZIP:	Lovington, NM 88260	City, State ZIP:	
Phone:	575-396-2378	Email:	Email Results to PM@eletechenv.com + Client

Project Name:	Berry SWD
Project Number:	12700
Project Location	Eddy County, NM
Sampler's Name:	Miguel Ramirez
PO #:	

### ANALYSIS REQUEST

#### Preservative Codes

HNO3: HN

H2SO4: H2

HCl: HL

(None): NO

NaOH: Na

MeOH: Me

Zn Acetate+ NaOH: Zn

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

### Sample Comments

SAMPLE RECEIPT	Temp Blank:	Yes <input checked="" type="radio"/> No <input type="radio"/>	Wet Ice: <input checked="" type="radio"/> No <input type="radio"/>	Thermometer ID:	Due Date:	Number of Containers/Preservative
Received Intact:	2.8 <input checked="" type="radio"/> 2.6 <input type="radio"/>	Yes <input checked="" type="radio"/> No <input type="radio"/>	N/A	7/2020-007		
Cooler Custody Seals:	Yes <input checked="" type="radio"/> No <input type="radio"/>	N/A	Correction Factor:	-0.2		
Sample Custody Seals:	Yes <input checked="" type="radio"/> No <input type="radio"/>	N/A	Total Containers:	2		
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Code
STRE5	Soil	9-24-20	5'	1	X	Chloride E300
NTTQS5	Soil	9-24-20	5'	1	X	BTEX 8021
					X	TPH Modified Ext
					X	TPH TX1005

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)

Received by: (Signature)

Joe Cifner

Date/Time

9-24-20 1312

1

2

3

4

5

**Eurofins Xenco, LLC****Prelogin/Nonconformance Report- Sample Log-In****Client:** Etech Environmental & Safety Solution, I

Acceptable Temperature Range: 0 - 6 degC

**Date/ Time Received:** 09.24.2020 01.12.00 PM

Air and Metal samples Acceptable Range: Ambient

**Work Order #:** 673500

Temperature Measuring device used : T\_NM\_007

<b>Sample Receipt Checklist</b>	<b>Comments</b>
#1 *Temperature of cooler(s)?	2.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6*Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A
Samples received in bulk containers.	

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

Analyst:

PH Device/Lot#:

**Checklist completed by:**

  
\_\_\_\_\_  
Cloe Clifton

Date: 09.24.2020

**Checklist reviewed by:**

  
\_\_\_\_\_  
Jessica Kramer

Date: 09.25.2020

## **Appendix D**

### **Photographic Log**

## Photographic Log

<b>Photo Number:</b> 1	
<b>Photo Direction:</b> West	
<b>Photo Description:</b> View of the affected area and header in western portion of the release Site.	September 9, 2020, 10:02 AM +32.20908, -104.01392

<b>Photo Number:</b> 2	
<b>Photo Direction:</b> East	
<b>Photo Description:</b> View of the affected area, header and electrical panel in eastern portion of the release Site.	September 9, 2020, 10:02 AM +32.20907, -104.01391

## Photographic Log

<b>Photo Number:</b> 3	
<b>Photo Direction:</b> Northwest	<b>Photo Description:</b> View of the affected area.

July 6, 2020, 1:42 PM  
+32.20901, -104.01399

<b>Photo Number:</b> 4	
<b>Photo Direction:</b> Northeast	<b>Photo Description:</b> View of the affected area, header and electrical panel in eastern portion of the release Site.

July 6, 2020, 1:42 PM  
+32.20901, -104.01399

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

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

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

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

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

CONDITIONS

Action 11821

**CONDITIONS OF APPROVAL**

Operator: SOLARIS WATER MIDSTREAM, LLC	907 Tradewinds Blvd, Suite B	Midland, TX79706	OGRID: 371643	Action Number: 11821	Action Type: C-141
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OCD Reviewer chensley	Condition None
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