

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party <u>Permian Water Solutions, LLC</u>	OGRID <u>373626</u>
Contact Name <u>James Corbett</u>	Contact Telephone <u>432 305-4124</u>
Contact email <u>james@permianws.com</u>	Incident # (assigned by OCD) <u>NAB1724135283</u>
Contact mailing address <u>415 W. Wall St., #320, Midland TX 79701</u>	

Location of Release Source

Latitude 32.10268° Longitude -104.06850°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name <u>Dorstate SWD 1</u>	Site Type <u>Well pad</u>
Date Release Discovered <u>8-23-17</u>	API# (if applicable) <u>30-015-23728</u>

Unit Letter	Section	Township	Range	County
<u>H</u>	<u>27</u>	<u>25 S</u>	<u>28 E</u>	<u>Eddy</u>

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) <u>25</u>	Volume Recovered (bbls) <u>zero</u>
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Overflowing sumps due to truck drivers inattention and excess rainwater.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? <u>Meets 25 bbl threshold as defined in code</u>
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? <u>Discovered by previous operator Cambrian Management, Ltd. at 1404 Aug. 23, 2017. Cambrian filed C-141 on Aug. 24, 2017. OCD received C-141 on Aug. 29, 2017.</u>	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why: <u>Water seeped into ground rendering containment moot. No free liquids left to recover.</u>
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u>Brian Wood</u> Title: <u>Consultant</u> Signature: <u></u> Date: <u>1-10-2020</u> email: <u>brian@permitswest.com</u> Telephone: <u>505 466-8120</u>
<u>OCD Only</u> Received by: _____ Date: _____

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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><50</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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

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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: Brian Wood Title: Consultant

Signature: _____

Date: 1-10-2020email: brian@permitswest.comTelephone: 505 466-8120**OCD Only**

Received by: _____

Date: _____

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Facility ID	
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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: Brian Wood Title: ConsultantSignature:  Date: 1-10-2020email: brian@permitswest.comTelephone: 505 466-8120**OCD Only**

Received by: _____ Date: _____

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral ApprovedSignature:  Date: 07/29/2021

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Closure

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

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

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

SITE INFORMATION

Report Type: Work Plan

General Site Information:

Site:	Dorstate SWD					
Company:	Permian Water Solutions					
Section, Township and Range	Unit H	Sec. 27	T 25S	R 28E		
Lease Number:	API No. 30-015-23728					
County:	Eddy					
GPS:	32.102684			-104.068565		
Surface Owner:	State					
Directions:	From the intersection of HWY 285 and Whites City Rd in rural Eddy County, travel north on HWY 285 for 2.8 miles, turn east onto lease road and continue for 0.20 miles to location on north side of lease road.					
Release Data:	2RP-4364					
Date Released:	8/23/2017					
Type Release:	Produced Water					
Source of Contamination:	Sump Overflow					
Fluid Released:	25 bbls					
Fluids Recovered:	0 bbls					

Official Communication:

Name:	James Corbitt		Clair Gonzales
Company:	Permian Water Solutions		Tetra Tech
Address:	415 W. Wall St.		901 West Wall Street
	Suite 320		Suite 100
City:	Midland, TX 79701		Midland, Texas
Phone number:	(432) 305-4124		(432) 687-8110
Fax:			
Email:	james@permianws.com		Clair.Gonzales@tetrattech.com

Site Characterization

Depth to Groundwater:	Less than 50'
Karst Potential:	Medium

Recommended Remedial Action Levels (RRALs)

Benzene	Total BTEX	TPH (GRO+DRO+MRO)	Chlorides
10 mg/kg	50 mg/kg	100 mg/kg	600 mg/kg



November 12, 2019

New Mexico State Land Office
310 Old Santa Fe Trail
P.O. Box 1148
Santa Fe, New Mexico 87504

Re: Site Characterization Report for the Permian Water Solutions, LLC., Dorstate SWD, Unit H, Section 27, Township 25 South, Range 28 East, Eddy County, New Mexico.

Tetra Tech, Inc. (Tetra Tech) was contacted by Permian Water Solutions, LLC. (Permian Water Solutions) to assess the impacted areas at the Dorstate SWD, Unit H, Section 27, Township 25 South, Range 28 East, Eddy County, New Mexico. The site coordinates are 32.102684°, -104.068565°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, submitted by Cambrian Management, LTD., the release was discovered on August 23, 2017, and released approximately 25 barrels of produced water due to overflowing sumps. None of the fluids were recovered. The initial C-141 Forms are included in Appendix A.

Basin Environmental Service Technologies (Basin Environmental) submitted a Corrective Action Plan dated August 28, 2018, which detailed sampling activities performed at the site. A copy of the Corrective Action Plan, as well as the data obtained is included in Appendix D.

Site Characterization

A site characterization was performed for the site and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. The site is located in a medium karst potential area. The nearest well is listed on the New Mexico Office of the State Engineer's website in Section 26, approximately 0.70 miles east-northeast of the site and has a reported depth to groundwater of 40' below ground surface. According to the Chevron Texaco Groundwater Trend map, the average depth to groundwater in this area is less than 50' below surface. The groundwater data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases,

Tetra Tech

901 West Wall St, Ste 100, Midland, TX 79701

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com



updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. A site characterization was performed for the site and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. The proposed RRAL for benzene was determined to be 10 milligrams per kilogram (mg/kg) and 50 mg/kg for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the site characterization, the proposed RRAL for TPH is 100 mg/kg (GRO + DRO + MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 600 mg/kg.

Soil Assessment and Analytical Results

Initial Assessment

Based on the previous sampling data, Tetra Tech personnel were onsite between May 14th and May 17th, 2019, in order to vertically define the impacts. A total of twenty (20) sample points (SP-1 through SP-4 and SP-6 through SP-21) were installed using a truck mounted air rotary rig to total depths ranging from 9'-10' and 59'-60' below surface. A sample point (SP-5) was originally planned to be installed in the area nearest to the wellhead, however due to numerous underground lines in the area, this sample point could not be safely installed. Additionally, one background bore hole was installed to a total depth of 39'-40' below surface to evaluate the native soils. Selected soil samples were collected and submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. The drilling logs for the sample points are included in Appendix C. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix E. The results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

Referring to Table 1, none of the samples analyzed showed benzene or total BTEX concentrations above the RRALs. Additionally, sample points SP-1, SP-2, SP-6, SP-7, SP-8, SP-9, SP-17, SP-18, SP-19, SP-20, and SP-21 did not show any TPH concentrations above the RRALs. However, sample points SP-3, SP-4, SP-10, SP-11, SP-12, SP-13, SP-14, and SP-16 showed elevated TPH concentrations in the soils which declined with depth to below the 100 mg/kg threshold at depths ranging from 2'-3' and 34'-35' below surface.

Sample points SP-1, SP-3, SP-6, SP-7, SP-14, SP-15, SP-16, SP-17, SP-18, SP-19, and SP-20 showed chloride concentrations above the 600 mg/kg threshold. However, the chloride concentrations declined with depth and were vertically defined at depths ranging from 6'-7' and 39'-30' below surface. However, sample points SP-2, SP-4, SP-8, SP-9, SP-10, SP-11, SP-12, SP-13, and SP-21 were not vertically delineated for chlorides and showed bottom hole concentrations ranging from 1,390 mg/kg to 6,960 mg/kg.

The background sample point, BG-1, showed a chloride high concentration of 672 mg/kg at 4'-5'.



Additional Assessment

As requested by NMSLO, Tetra Tech personnel returned to the site between October 23rd and October 25th, 2019 in order to horizontally define the release area as well as to install boreholes inside the bermed facility. A total of twenty-two (22) horizontal samples (H-1 through H-22) were installed around the perimeter of the release to total depths ranging from 0-6" and 2' below surface. Three boreholes (BH-22, BH-23, and BH-24) were installed using a truck mounted air rotary drilling rig to total depths of 29'-30' below surface inside the bermed facility. Additional sample points could not be installed due to the steep incline of the berm and safety concerns for onsite staff. All collected samples were submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

Bermed Facility

Referring to Table 1, none of the samples collected showed benzene or total BTEX concentrations above the RRAL's. However, the areas of BH-22, BH-23, and BH-24 showed elevated TPH concentrations to the soils. The area of BH-22 showed a TPH high concentration of 15,800 mg/kg at 0-1' which steadily declined with depth to 87.9 mg/kg at 19'-20' below surface. The areas of BH-23 and BH-24 showed TPH high concentrations of 2,680 mg/kg and 8,230 mg/kg, respectively at 0-1', which then declined with depth to <50.0 mg/kg (6'-7') and 94.5 mg/kg (9'-10'), respectively.

Additionally, the areas of BH-22, BH-23, and BH-24 showed minimal chloride concentrations in the surficial soils, however the chloride concentrations increased with depth and showed bottom hole concentrations of 1,160 mg/kg, 2,640 mg/kg, and 2,470 mg/kg, respectively.

Horizontal Sampling

Referring to Table 1, none of the samples collected showed benzene or total BTEX concentrations above the RRALs. However, the areas of H-2 and H-12 showed TPH concentrations above the RRAL at 0-1' and 1'-2' with concentrations of 169 mg/kg and 141 mg/kg, respectively. Based on this data, Tetra Tech personnel returned to the site and installed additional horizontal sample points (H-2 (1) and H-12 (1)) in order to horizontally define the release. The samples collected at H-2 (1) and H-12(1) did not show any benzene, total BTEX, TPH, or chloride concentrations above the RRALs. None of the remaining horizontal sample points showed any TPH concentrations above the RRALs. Additionally, all of the samples collected showed chloride concentrations below the background concentration of 672 mg/kg; with the exception of H-8 at 1-2' with a concentration of 855 mg/kg and H-19 at 1-2' with a concentration of 847 mg/kg.

Work Plan

Based on the laboratory data, Permian Water Solutions proposes to excavate the areas as shown on Figure 4 and highlighted (green) on Table 1. The areas of sample points SP-1, SP-2, SP-4, SP-7 through SP-14 and SP-19 through SP-21 will be excavated to approximately 4.0' below surface. The areas of SP-3, SP-15, SP-17, and SP-24 will be excavated to approximately 6-7' below surface, the areas of SP-12 and BH-22 will be excavated to approximately 15' below surface, and the areas of SP-6, H-2, and SP-16 will be excavated to approximately 1'-2' below



surface. Additionally, the areas of SP-1, SP-2, SP-4, SP-6, SP-8 through SP-14, SP-15, SP-16, and SP-21 through SP-24 will be capped with a 20-mil liner at 4.0' below surface in order to prevent further vertical migration of the deeper impact.

Once excavated, composite bottom hole and sidewall confirmation samples will be collected every 200 square feet, to be representative of the area and to confirm proper removal of the impacted soils. The areas will then be backfilled with clean material to surface grade. Permian Water Solutions estimates approximately 36,600 cubic yards will be excavated, and the remediation to be implemented 90 days after the work plan is approved by both the NMSLO and NMOCD and all remediation access permits are obtained.

The proposed excavation depths may not be reached due to wall cave ins and safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safety concerns for onsite personnel. As such, Permian Water Solutions will excavate the impacted soils to the maximum extent practicable.

Monitor Wells

In addition to the proposed soil remediation activities, Permian Water Solutions proposes to install three monitor wells on the pad area in order to evaluate the groundwater conditions in the area. Tetra Tech will supervise the installation of the monitor wells to a total depth of approximately 60' below surface using an air rotary rig. The monitor well will be constructed of 2-inch diameter, screw threaded, schedule 40 PVC casing and 0.020-inch factory slotted screen. The well screens, approximately twenty (20) feet in length, will be installed with approximately 15.0' of screen into the groundwater and 5.0' above the groundwater. The well screens will be filter packed with graded (20-40) silica sand, which will be placed in the annular space between the borehole wall and screen to a depth of approximately two (2) feet above the screen.

Once completed, the monitor wells will be properly developed, and all of the fluids will be contained in drums for proper disposal. Additionally, the wells will be surveyed. At the time of sampling, the well caps will be opened and water level measurements will be collected from the top of the casing. The depth to water measurements will be recorded to the nearest 0.01 foot. Approximately three (3) casing volumes of water will be purged from each well using a dedicated bailer and disposable line. All water generated for the purging will be contained in drums for proper disposal. The proposed locations of the monitor wells are shown on Figure 5.

The groundwater samples will be placed into labeled and preserved containers provided by the laboratory. They will then be analyzed for chlorides by EPA method 300.0, TPH by method 8015 modified, and BTEX by EPA Method 8021B. Based on the results of the initial sampling event, a groundwater monitoring plan will be submitted to the NMOCD and NMSLO for approval.



Conclusion

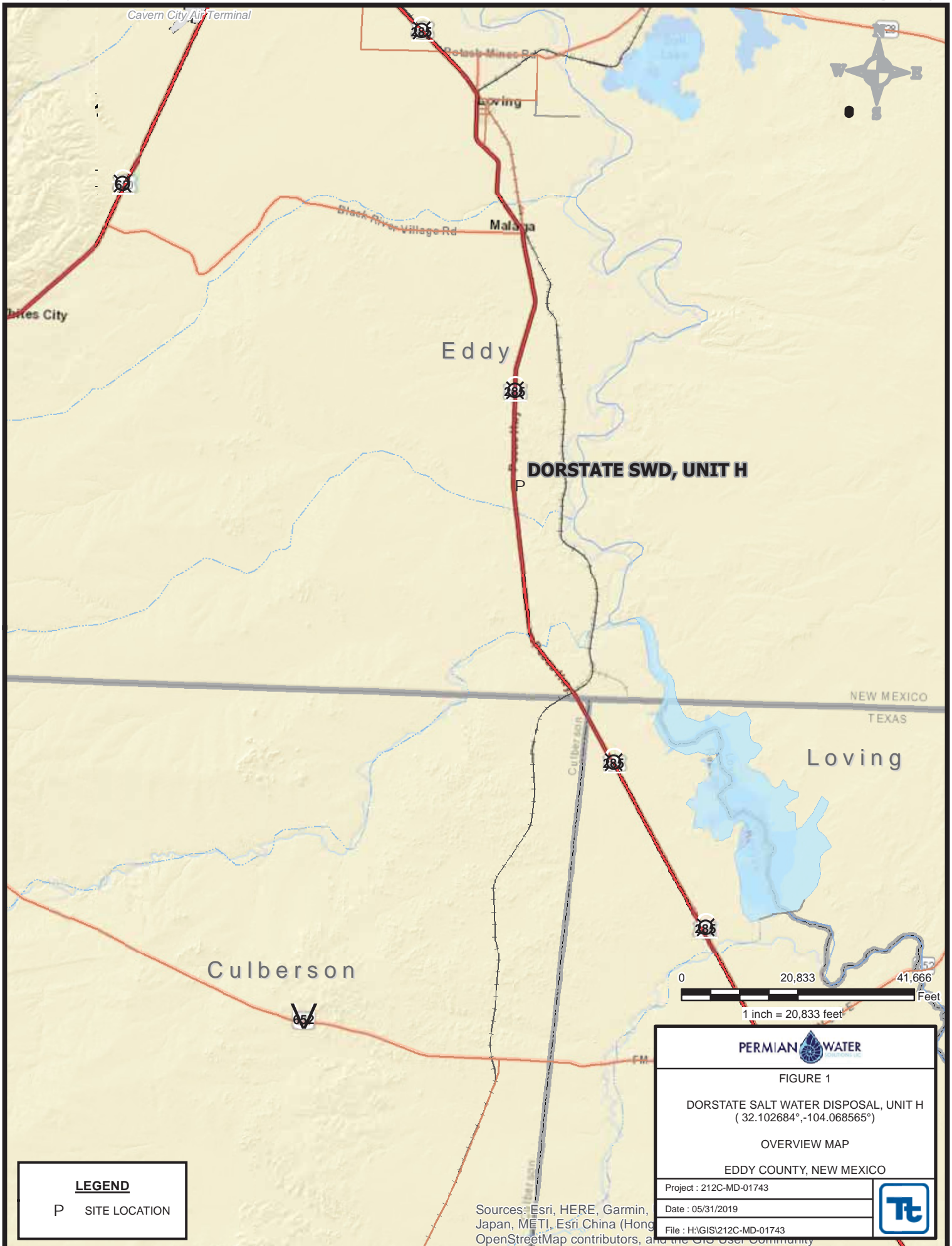
Once the soil remediation activities are completed, a soils closure report and a groundwater monitoring report will be prepared for NMOCD and NMSLO approval. If you have any questions or comments concerning the assessment or remediation activities for this site, please call at (432) 682-4559.

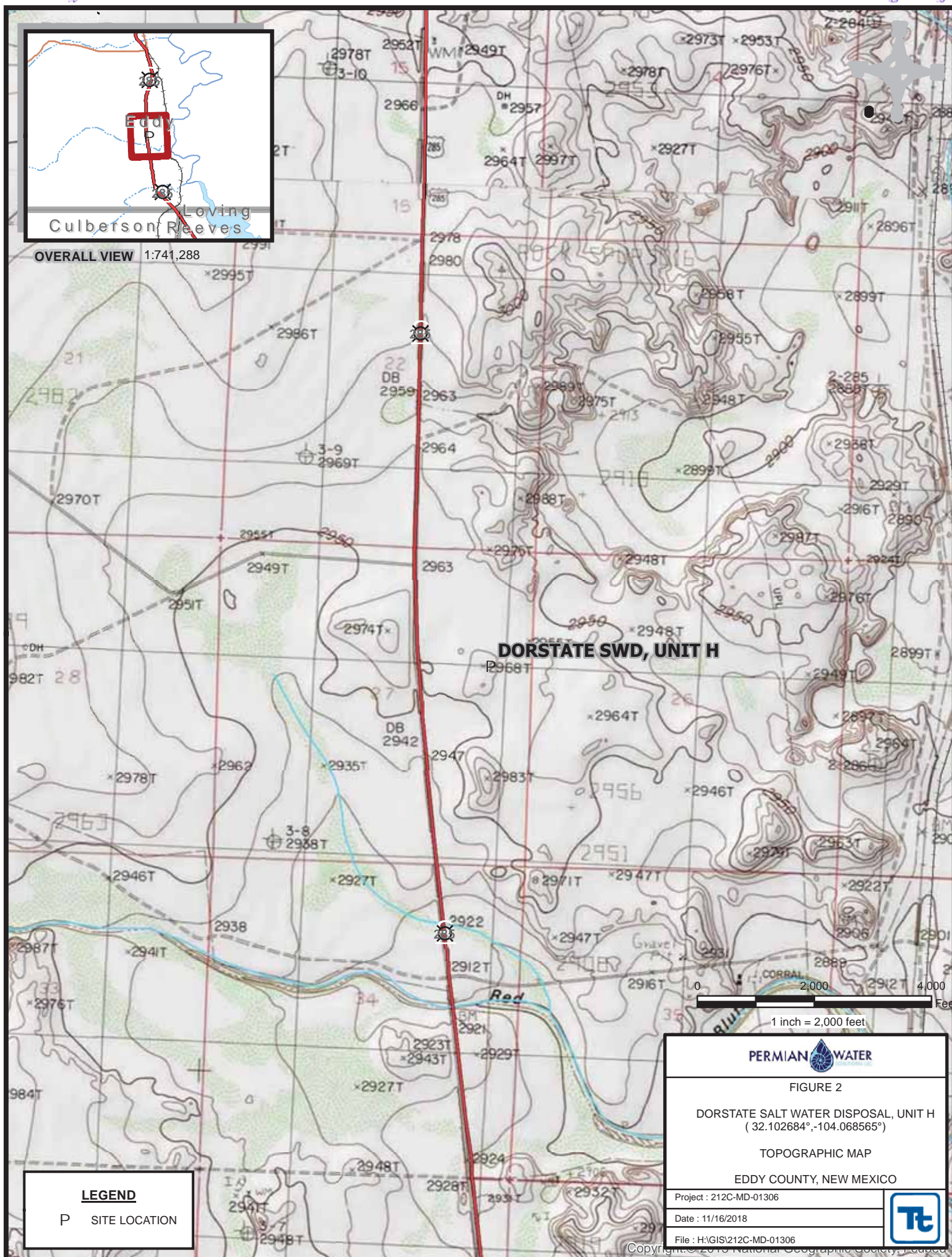
Respectfully submitted,
TETRA TECH

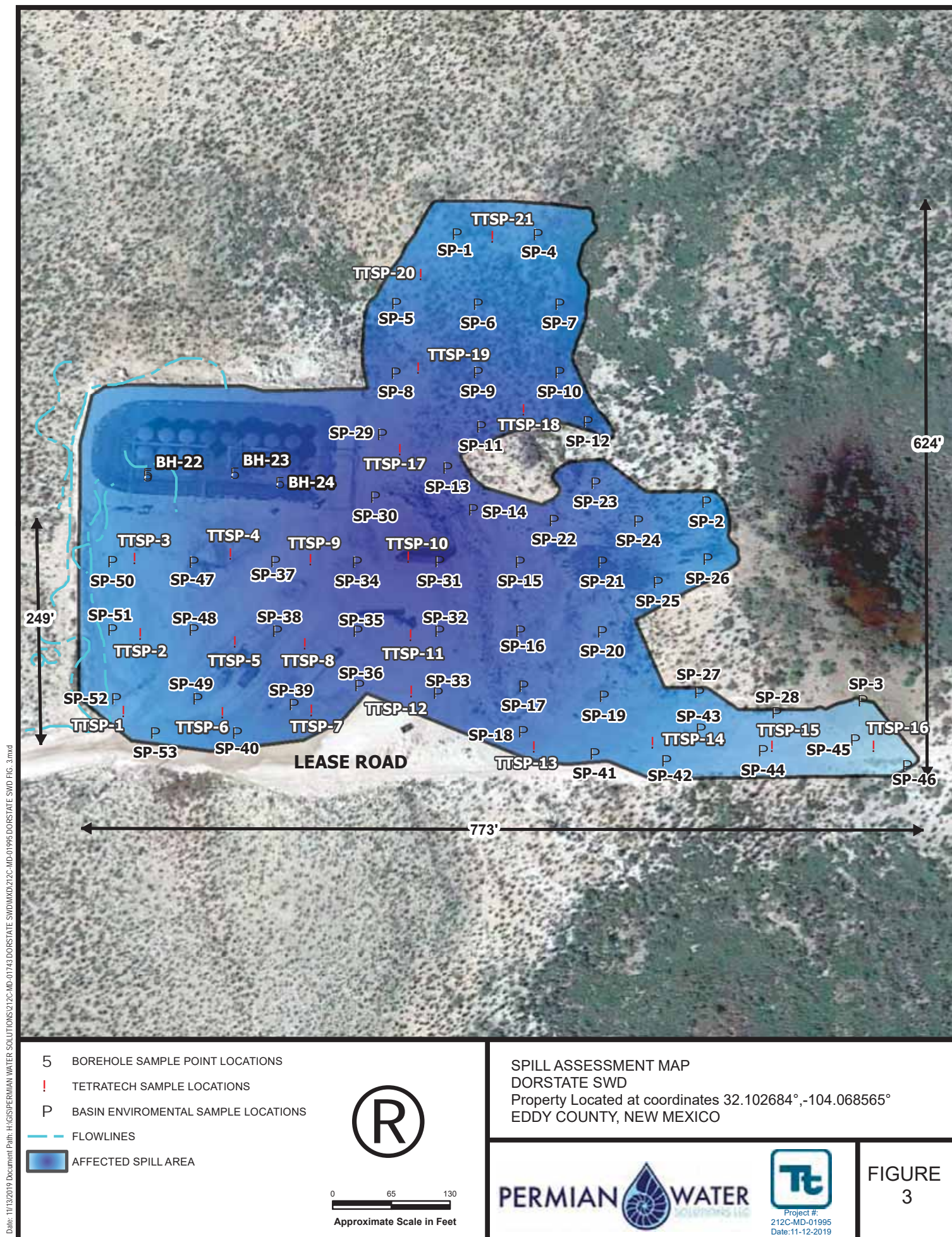
A handwritten signature in blue ink that reads 'Clair Gonzales'.

Clair Gonzales, P.G.,
Project Manager

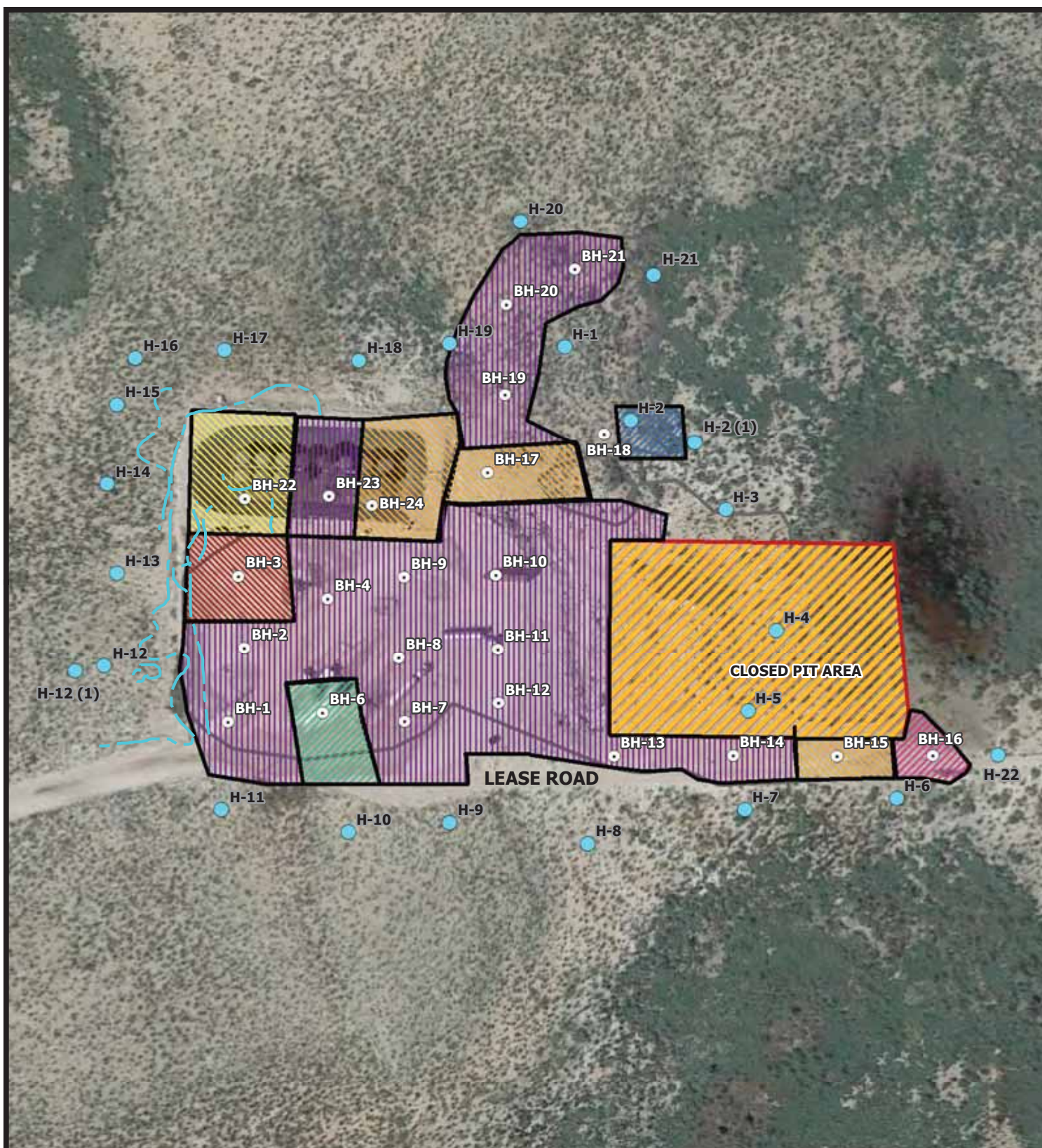
Figures





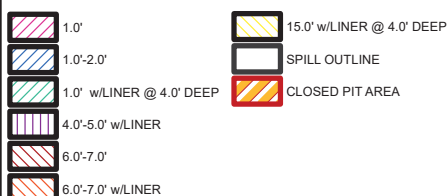


Date: 11/13/2019 Document Path: H:\GIS\PERMAN WATER SOLUTIONS\212C-MD-01995 DORSTATE SWD FIG. 4.mxd



5 BOREHOLE SAMPLE LOCATIONS
 (HORIZONTAL SAMPLE LOCATIONS
 FLOWLINES

EXCAVATED AREAS & DEPTHS



0 75 150
 Approximate Scale in Feet

EXCAVATED AREA & DEPTH MAP
DORSTATE SWD

Property Located at coordinates 32.102684°,-104.068565°
 EDDY COUNTY, NEW MEXICO



FIGURE
4



Tables

Table 1
Permian Water Solutions
Dorstate SWD
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
SP-1	5/4/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	5,360
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	4,640
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	1,920
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	1,200
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	1,140
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	672
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	480
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	400
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	352
	"	34-35	-	X		-	-	-	-	-	-	-	-	-	304
SP-2	5/14/2019	0-1	-	X		<10.0	14.8	<10.0	14.8	<0.050	<0.050	<0.050	<0.150	<0.300	7,520
	"	2-3	-	X		<10.0	51.5	15.6	67.1	<0.050	<0.050	<0.050	<0.150	<0.300	4,720
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	2,160
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	624
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	1,020
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	2,680
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	3,360
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	3,000
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	3,800
	"	34-35	-	X		-	-	-	-	-	-	-	-	-	1,630
	"	39-40	-	X		-	-	-	-	-	-	-	-	-	2,240
	"	44-45	-	X		-	-	-	-	-	-	-	-	-	2,400
	"	49-50	-	X		-	-	-	-	-	-	-	-	-	1,620
	"	54-55	-	X		-	-	-	-	-	-	-	-	-	1,010
	"	59-60	-	X		-	-	-	-	-	-	-	-	-	1,390
SP-3	5/14/2019	0-1	-	X		30.9	1,940	358	2,329	<0.050	<0.050	<0.050	<0.150	<0.300	3,360
	"	2-3	-	X		669	9,200	1,120	10,989	<0.050	<0.050	<0.050	<0.150	<0.300	1,860
	"	4-5	-	X		115	2,470	264.0	2,849	-	-	-	-	-	1,490
	"	6-7	-	X		<10.0	703	34.2	737	-	-	-	-	-	1,120
	"	9-10	-	X		<10.0	99.8	<10.0	99.8	-	-	-	-	-	624
	"	14-15	-	X		<10.0	35.7	<10.0	35.7	-	-	-	-	-	480

Table 1
Permian Water Solutions
Dorstate SWD
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
SP-4	5/14/2019	0-1	-	X		<10.0	647	397	1,044	<0.050	<0.050	<0.050	<0.150	<0.300	11,300
	"	2-3	-	X		<10.0	80.1	50.0	130	<0.050	<0.050	<0.050	<0.150	<0.300	5,440
	"	4-5	-	X		<10.0	<10.0	<10.0	<10.0	-	-	-	-	-	5,280
	"	6-7	-	X		<10.0	23.6	<10.0	23.6	-	-	-	-	-	3,680
	"	9-10	-	X		<10.0	<10.0	<10.0	<10.0	-	-	-	-	-	1,810
	"	14-15	-	X		<10.0	<10.0	<10.0	<10.0	-	-	-	-	-	1,150
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	1,420
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	1,760
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	2,080
	"	34-35	-	X		-	-	-	-	-	-	-	-	-	736
	"	39-40	-	X		-	-	-	-	-	-	-	-	-	1,120
	"	44-45	-	X		-	-	-	-	-	-	-	-	-	544
	"	49-50	-	X		-	-	-	-	-	-	-	-	-	1,630
SP-6	5/15/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,380
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	560
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	288
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	272
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	1,470
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	1,330
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	352
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	416
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	688
	"	34-35	-	X		-	-	-	-	-	-	-	-	-	496
SP-7	5/15/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	5,920
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	3,680
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	1,840
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	960
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	976
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	672
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	528
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	352
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	512

Table 1
Permian Water Solutions
Dorstate SWD
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
SP-8	5/15/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	3,040
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,280
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	1,650
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	864
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	1,880
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	1,020
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	3,160
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	3,040
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	4,480
	"	34-35	-	X		-	-	-	-	-	-	-	-	-	3,720
	"	39-40	-	X		-	-	-	-	-	-	-	-	-	5,360
	"	44-45	-	X		-	-	-	-	-	-	-	-	-	4,560
	"	49-50	-	X		-	-	-	-	-	-	-	-	-	5,840
SP-9	5/15/2019	0-1	-	X		<10.0	59.2	19.8	79.0	<0.050	<0.050	<0.050	<0.150	<0.300	7,600
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	3,280
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	2,680
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	896
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	1,220
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	1,420
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	2,600
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	3,440
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	3,040
	"	34-35	-	X		-	-	-	-	-	-	-	-	-	4,120
	"	39-40	-	X		-	-	-	-	-	-	-	-	-	3,520
SP-10	5/17/2019	0-1	-	X		<10.0	1,320	1,790	3,110	<0.050	<0.050	<0.050	<0.150	<0.300	4,000
	"	2-3	-	X		<10.0	26.2	19.3	45.5	<0.050	<0.050	<0.050	<0.150	<0.300	3,120
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	4,160
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	1,760
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	2,800
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	3,600
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	2,920
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	3,080
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	4,240
	"	34-35	-	X		-	-	-	-	-	-	-	-	-	4,640
	"	39-40	-	X		-	-	-	-	-	-	-	-	-	4,880

Table 1
Permian Water Solutions
Dorstate SWD
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
SP-11	5/17/2019	0-1	-	X		<10.0	120	44.9	165	<0.050	<0.050	<0.050	<0.150	<0.300	1,760
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	400
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	1,070
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	1,700
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	3,600
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	6,000
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	7,360
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	5,760
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	6,800
	"	34-35	-	X		-	-	-	-	-	-	-	-	-	5,730
	"	39-40	-	X		-	-	-	-	-	-	-	-	-	5,730
	"	44-45	-	X		-	-	-	-	-	-	-	-	-	6,960
SP-12	5/17/2019	0-1	-	X		<10.0	417	124	541	<0.050	<0.050	<0.050	<0.150	<0.300	4,960
	"	2-3	-	X		240	6,620	1,960	8,820	<0.050	0.229	1.29	0.326	1.85	3,320
	"	4-5	-	X		2,360	18,500	2,730	23,590	-	-	-	-	-	8,800
	"	6-7	-	X		112	2,400	479	2,991	-	-	-	-	-	2,520
	"	9-10	-	X		147	2,940	251	3,338	-	-	-	-	-	3,840
	"	14-15	-	X		446	5,640	1,170	7,256	-	-	-	-	-	5,520
	"	19-20	-	X		<10.0	1,250	212	1,462	<0.050	<0.050	<0.050	0.212	<0.300	6,320
	"	24-25	-	X		<10.0	262	<10.0	262	<0.050	<0.050	<0.050	<0.150	<0.300	7,520
	"	29-30	-	X		<10.0	180	<10.0	180	<0.050	<0.050	<0.050	<0.150	<0.300	7,200
	"	34-35	-	X		<10.0	293	<10.0	293	<0.050	<0.050	<0.050	<0.150	<0.300	6,000
	"	39-40	-	X		<10.0	54.0	<10.0	54.0	<0.050	<0.050	<0.050	<0.150	<0.300	6,080
	"	44-45	-	X		<10.0	81.1	<10.0	81.1	<0.050	<0.050	<0.050	<0.150	<0.300	6,480
SP-13	5/17/2019	0-1	-	X		<10.0	2,070	1,050	3,120	<0.050	<0.050	<0.050	<0.150	<0.300	3,200
	"	2-3	-	X		<10.0	129	35.5	165	<0.050	<0.050	<0.050	<0.150	<0.300	3,440
	"	4-5	-	X		<10.0	<10.0	<10.0	<10.0	-	-	-	-	-	1,380
	"	6-7	-	X		<10.0	<10.0	<10.0	<10.0	-	-	-	-	-	3,440
	"	9-10	-	X		<10.0	<10.0	<10.0	<10.0	-	-	-	-	-	3,840
	"	14-15	-	X		<10.0	<10.0	<10.0	<10.0	-	-	-	-	-	6,560
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	7,200
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	4,800
	"	29-30	-	X		-	-	-	-	-	-	-	-	-	1,420
	"	34-35	-	X		-	-	-	-	-	-	-	-	-	4,320
	"	39-40	-	X		-	-	-	-	-	-	-	-	-	4,480

Table 1
Permian Water Solutions
Dorstate SWD
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
SP-14	5/15/2019	0-1	-	X		<10.0	87.9	39.1	127	<0.050	<0.050	<0.050	<0.150	<0.300	8,000
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	4,600
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	3,960
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	1,440
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	672
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	1,500
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	1,540
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	1,020
SP-15	5/15/2019	0-1	-	X		<10.0	545	203	748	<0.050	<0.050	<0.050	<0.150	<0.300	9,600
	"	2-3	-	X		<10.0	31.5	21.2	52.7	<0.050	<0.050	<0.050	<0.150	<0.300	2,960
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	8,400
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	10,300
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	3,440
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	464
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	720
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	352
SP-16	5/15/2019	0-1	-	X		<10.0	547	224	771	<0.050	<0.050	<0.050	<0.150	<0.300	3,120
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	672
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	288
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	144
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	1,250
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	848
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	560
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	1,120
SP-17	5/15/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	8,000
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,230
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	1,390
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	992
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	352
SP-18	5/15/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	112
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	384
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	384
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	544
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	736
SP-18	5/15/2019	14-15	-	X		-	-	-	-	-	-	-	-	-	448

Table 1
Permian Water Solutions
Dorstate SWD
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
SP-19	5/15/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	5,360
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	2,480
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	2,400
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	480
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	256
SP-20	5/16/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	7,920
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,630
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	2,480
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	432
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	144
SP-21	5/16/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	2,760
	"	2-3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	2,680
	"	4-5	-	X		-	-	-	-	-	-	-	-	-	2,240
	"	6-7	-	X		-	-	-	-	-	-	-	-	-	1,920
	"	9-10	-	X		-	-	-	-	-	-	-	-	-	1,340
	"	14-15	-	X		-	-	-	-	-	-	-	-	-	496
	"	19-20	-	X		-	-	-	-	-	-	-	-	-	1,100
	"	24-25	-	X		-	-	-	-	-	-	-	-	-	1,390

Table 1
Permian Water Solutions
Dorstate SWD
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
BH-22	10/25/2019	0-1	-	X		1150	13,100	1,550	15,800	<0.00200	0.0422	0.0281	0.438	0.508	677
		2-3	-	X		705	8,840	933	10,500	<0.00198	0.0222	0.022	0.347	0.391	957
		4-5	-	X		186	3,580	369	4,140	<0.00199	0.0153	0.0223	0.198	0.235	1,560
		6-7	-	X		<49.9	783	79.9	863	<0.00199	<0.00199	<0.00199	0.0342	0.0342	1,380
		9-10	-	X		<49.9	318	72.2	390	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	1,800
		14-15	-	X		<49.8	198	<49.8	198	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	1,930
		19-20	-	X		<50.0	87.9	<50.0	87.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	1,660
		24-25	-	X		<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	598
		29-30	-	X		<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	1,160
BH-23	10/25/2019	0-1	-	X		58.1	2,320	305	2,680	<0.00200	0.00254	<0.00200	0.0192	0.0217	398
		2-3	-	X		<49.9	430	63.0	493	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	415
		4-5	-	X		<50.0	424	60.6	485	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	348
		6-7	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	424
		9-10	-	X		<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	403
		14-15	-	X		<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	1,310
		19-20	-	X		<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	1,490
		24-25	-	X		<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	1,520
		29-30	-	X		<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	2,640
BH-24	10/25/2019	0-1	-	X		156	7,170	906	8,230	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	840
		2-3	-	X		105	4,360	538	5,000	<0.00199	<0.00199	<0.00199	0.0246	0.0246	983
		4-5	-	X		67.2	2,310	245	2,620	<0.00201	<0.00201	<0.00201	0.0268	0.0268	2,810
		6-7	-	X		<49.9	161	<49.9	161	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	362
		9-10	-	X		<50.0	94.5	<50.0	94.5	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	1,100
		14-15	-	X		<49.9	70.4	<49.9	70.4	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	1,290
		19-20	-	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	400
		24-25	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	1,590
		29-30	-	X		<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	2,470
BG-1	5/16/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
		"	2-3	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	208
		"	4-5	-	X	-	-	-	-	-	-	-	-	-	672
		"	6-7	-	X	-	-	-	-	-	-	-	-	-	352
		"	9-10	-	X	-	-	-	-	-	-	-	-	-	256
		"	14-15	-	X	-	-	-	-	-	-	-	-	-	176
		"	19-20	-	X	-	-	-	-	-	-	-	-	-	160
		"	24-25	-	X	-	-	-	-	-	-	-	-	-	144
		"	29-30	-	X	-	-	-	-	-	-	-	-	-	80.0
		"	34-35	-	X	-	-	-	-	-	-	-	-	-	128
		"	39-40	-	X	-	-	-	-	-	-	-	-	-	112

Table 1
Permian Water Solutions
Dorstate SWD
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
H-1	10/23/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	322
	"	1-2	-	X		<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	325
H-2	10/23/2019	0-1	-	X		<50.0	169	<50.0	169	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	148
	"	1-2	-	X		<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	275
H-2 (1)	11/11/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	144
H-3	10/23/2019	0-1	-	X		<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	135
	"	1-2	-	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	148
H-4	10/23/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	641
	"	1-2	-	X		<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	259
H-5	10/23/2019	0-1	-	X		<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	452
	"	1-2	-	X		<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	492
H-6	10/23/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	439
	"	1-2	-	X		<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	516
H-7	10/23/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	243
	"	1-2	-	X		<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	175
H-8	10/23/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	281
	"	1-2	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	855
H-9	10/24/2019	0-8"	-	X		<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	154
H-10	10/24/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	192
	"	1-2	-	X		<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	72.7
H-11	10/24/2019	0-10"	-	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	0.00498	0.00914	0.01410	125
H-12	10/24/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	0.00440	0.00571	0.01010	57.4
	"	1-2	-	X		<50.0	141	<50.0	141	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	174
H-12 (1)	11/11/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
	"	1-2	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
H-13	10/24/2019	0-1	-	X		<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	332
H-14	10/24/2019	0-1	-	X		<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	32.0
	"	1-2	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	25.8
H-15	10/24/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	6.18
	"	1-2	-	X		<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	31.9
H-16	10/24/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	22.7
	"	1-2	-	X		<49.8	<49.8	<49.8	<49.8	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	307
H-17	10/25/2019	0-1	-	X		<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	38.3
	"	1-2	-	X		<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	58.5
H-18	10/25/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	59.2
	"	1-2	-	X		<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	117
H-19	10/25/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	140
	"	1-2	-	X		<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	847
H-20	10/25/2019	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	435
	"	1-2	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	126
H-21	11/11/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
H-22	11/11/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	512

(-) Not Analyzed

Photos

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View West – Area of SP-1



View North – Area of SP-2

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View North – Area of SP-3



View West – Area of SP-4

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View North – Area of SP-6



View Northwest – Area of SP-7

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View Southwest – Area of SP-8



View Southwest – Area of SP-9

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View Northwest – Area of SP-10



View Southeast – Area of SP-11

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View Southeast – Area of SP-12



View Northwest – Area of SP-13 and SP-14

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View North – Area of SP-15



View North – Area of SP-16

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View East – Area of SP-17



View Northwest – Area of SP-18

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View Southwest – Area of SP-19



View Northwest – Area of SP-20

Permian Water Solutions,
Dorstate SWD
Eddy County, New Mexico



View North – Area of SP-21

Permian Water Solutions
Dorstate SWD
Eddy County, New Mexico



View East – Areas of BH-22, BH-23, and BH-24



View West – North Side of Facility

Appendix A

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

State of New Mexico
Energy Minerals and Natural Resources

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

NM OIL CONSERVATION

ARTESIA DISTRICT

AUG 29 2017

Form C-141
Revised April 3, 2017

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

RECEIVED

Release Notification and Corrective Action

NAB1724135283 198688 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company	Cambrian Management, Ltd.	Contact	Mike Anthony
Address	PO Box 872, Midland, TX 79702	Telephone No.	432-631-4398
Facility Name	Dacstate SWD	Facility Type	SWD
Surface Owner	Mineral Owner	API No. 30-015-23728	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	27	25S	28E	1980	North	660	East	Eddy

Latitude 32.102684 Longitude 104.068565 NAD83

NATURE OF RELEASE

Type of Release	Water, Produced Water	Volume of Release	25 bbls	Volume Recovered	0
Source of Release		Date and Hour of Occurrence		Date and Hour of Discovery	8-23-17
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	8:04 PM		
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Overflowing bumps due to truck drivers inattention and excess rainwater.

We will get soil samples and Trinity Environmental and proceed with proper remediation and cleanup

Describe Area Affected and Cleanup Action Taken.*

Pasture land and SWD location

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

Signature: Denise Jones	OIL CONSERVATION DIVISION	
Printed Name: Denise Jones	Signed By: Mike Anthony	
Title: Regulatory Analyst	Approved by Environmental Specialist:	
E-mail Address: djones@cambrianmgmt.com	Approval Date: 8/29/17	Expiration Date: N/A
Date: 8-24-17 Phone: 432-620-9181	Conditions of Approval: See attached	Attached: SRP-4864

* Attach Additional Sheets If Necessary

Form C-141

Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<50 _____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input 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 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 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 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 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 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 type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

Form C-141

State of New Mexico

Page 4

Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Form C-141

State of New Mexico

Page 5

Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
Permian Water Solutions - Dorstate SWD

24 South 27 East

6	5	4	3	2	1
7	8 17	9	10	11	12
18 30	17	16	15	14	13 30
34					31
19	20	21	22	23	24
			70		
30	29	28	27	26	25
31	32	33	34	35	36

24 South 28 East

6 70	5 30	4 30	3	2 55	1 60
7	8 50	9	10	11	12
18	17	16	15	14	13
	42	29	18	52	34
19	20	21	22	23	24
	48				
30	29	28	27	26	25
31	32	33	34	35	36

24 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
160	17 4	16	15	14	13
		18			
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 27 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
					92
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
		19			

25 South 28 East

6	5	4 35	3 32	2	1
7 45	8	9	10	11	12
18	17	16	15 48	14	13
67			49		
19	20	21	22	23	24
	96				
30	29	28	27	26 40	25
	15	90			
31	32	33	34	35 55	36
					40

25 South 29 East

6	5	4	3	2	1
40	8	9	10	11	12
18	17	16	15 40	14	13
			60		
19	20	21	22	23	24
30	29	28	27	26	25
30					
31	32 115	33	34	35	36

26 South 27 East

6	5	4	3	2	1
	12				
7	8	9	10	11	12
18	17	16	15	14	13
					35
19	20	21	22	23	24
			50		
30	29	28	27	26	25
31	32	33	34	35	36

26 South 28 East

6	5	4	3	2 120	1
				21	
7	8	9	10	11	12
18	17	16	15	14	13
				120	56
19	20	21	22	23	24
			120		
30	29	28	27	26	25
31	32	33	34	35	36

26 South 29 East

6	5 78	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
		125			
19	20	21	22 57	23	24
			69		
30	29	28	27	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

90 Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

121 Abandoned Waterwell (recently measured)



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01278	C	ED		4	3	28	25S	28E		585470	3551338*	205	90	115
C 01411	C	ED		4	4	2	04	25S	28E	586289	3558522*	69	35	34
C 01453	C	ED		1	2	26	25S	28E		589096	3552612*	70	40	30
C 01522	C	ED			1	22	25S	28E		586843	3554004*	150		
C 01573 POD1	C	ED		3	1	4	20	25S	28E	584144	3553361	176	96	80
C 02668	C	ED		2	1	2	09	25S	28E	585890	3557525*	150		
C 03263 POD1	CUB	ED		1	1	1	07	25S	28E	581628	3557501*	133		
C 03836 POD1	C	ED		2	2	4	29	25S	28E	584682	3551934	300	30	270
C 03861 POD1	C	ED		4	2	3	18	25S	28E	582266	3554864	91	63	28

Average Depth to Water: **59 feet**

Minimum Depth: **30 feet**

Maximum Depth: **96 feet**

Record Count: 9

PLSS Search:

Township: 25S

Range: 28E

*UTM location was derived from PLSS - see Help

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

5/29/19 11:48 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER





Appendix C

Released to Imaging: 7/29/2021 3:19:33 PM

Released to Imaging: 7/29/2021 3:19:33 PM

Released to Imaging: 7/29/2021 3:19:33 PM

[illegible]

[illegible]

Released to Imaging: 7/29/2021 3:19:33 PM

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



Borehole ID:
BH-22

Soil Drilling Log with Field Testing Results

Project Name :	Dorstate SWD
Project No. :	Pending
Location :	Eddy Co, NM
Coordinates :	32.103014 -104.069327
Elevation :	

Date : Friday, October 25, 2019

Sampler : Conner Moehring

Driller : Scarborough Drilling

Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
-------------	----	------------------	---------------------------------	-----

0	black and grey gravel and sand		H.O
	large grey and black rocks		H.O
5	Very dense layer of caliche		H.O
	black and grey caliche		H.O
10	yellow tan caliche		H.O
15	tan and yellow caliche		H.O
20	tan yellow caliche with noudles	1,520	S.O
25	yellow caliche		S.O
30	Moist yellow/white caliche		
35			
40			
45			
50			

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
-------------	----	------------------	---------------------------------	----------------------------------

[illegible]

* H.O. = Heavy Odor
* H.S. = Heavy Staining

- * L.O. = Low Odor
- * L.S. = Low Staining



Borehole ID:
BH-23

Soil Drilling Log with Field Testing Results

Project Name :	Dorstate SWD
Project No. :	Pending
Location :	Eddy Co, NM
Coordinates :	32.103021 -104.069062
Elevation :	

Date : Friday, October 25, 2019

Sampler : Conner Moehring

Driller : Scarborough Drilling

Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
-------------	----	------------------	---------------------------	-----

0	Black and grey gravel		S.O
	large and grey gravel with caliche		S.O
5	yellow and white caliche		S.O
10	white and grey caliche	920	S.O
15	white and yellow caliche		L.O
20	white and yellow caliche	1,900	L.O
25	Fine powdery gypsum		L.O
30	moist caliche yellowish white		
35			
40			
45			
50			

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
-------------	----	------------------	---------------------------------	----------------------------------

[illegible]

* H.O. = Heavy Odor
* H.S. = Heavy Staining

- * L.O. = Low Odor
- * L.S. = Low Staining



Borehole ID:
BH-24

Soil Drilling Log with Field Testing Results

Project Name :	Dorstate SWD
Project No. :	Pending
Location :	Eddy Co, NM
Coordinates :	32.102988 -104.068980
Elevation :	

Date : Friday, October 25, 2019

Sampler : Conner Moehring

Driller : Scarborough Drilling

Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
-------------	----	------------------	---------------------------	-----

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
-------------	----	------------------	---------------------------------	----------------------------------

0	Grey , yellow caliche and gravel		H.O
	Large caliche gravel		
5	grey caliche		H.O
	Dense layer of caliche		
10	tan/ white caliche		H.O
15	white caliche		H.O
20	brown yellow caliche		H.O
25	brown yellow caliche		S.O
30	Mosit fine caliche		S.O
35			
40			
45			
50			

[illegible]

* H.O. = Heavy Odor
* H.S. = Heavy Staining

- * L.O. = Low Odor
- * L.S. = Low Staining

Appendix D



PO Box 301 | Lovington, NM 88260 | Phone 575.396.2378

August 28, 2018

Attn. Mike Bratcher
NMOCD, District 2
811 South First Street
Artesia, NM 88210

**RE: Corrective Action Plan
Cambrian Management
Dorstate SWD
UL/H Sec.27, T25S R28E
32.102789, -104.068449
NMOCD Reference # 2RP – 4364**

Mr. Bratcher:

Cambrian Management (Cambrian) has retained Basin Environmental Service Technologies (Basin) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately eight and one-half (8.5) miles south of Malaga, New Mexico at Unit Letter H of Section 27 in Township 25 South of Range 28 East (See Figure 1). This site is located in an area where groundwater is anticipated to be encountered at an estimated depth sixty-five (65) +/- feet below ground surface (bgs) (See Figure 4).

On August 23, 2017, a representative of the New Mexico State Land Office (NMSLO) notified Cambrian and the New Mexico Oil Conservation Division's (NMOCD) Artesia District Office via email that a release (or series of releases) had occurred at the Dorstate Salt Water Disposal (SWD). It was determined that driver inattention and excess rainwater had caused the on-site sumps to overflow. This resulted in the release of approximately twenty-five (25) barrels of produced water. No liquids from the release were recovered. An environmental site assessment was performed, and it was determined that the current release and/or historical release(s) is estimated to have impacted two-hundred and twelve thousand, six-hundred and seventy-two (212,672) square feet (ft²) of gypsum pad and pasture. An initial C-141 (Release Notification and Corrective Action) was submitted to NMOCD on August 24th, 2017 for approval.

Basin personnel were on site beginning July 23rd, 2018, to perform another assessment. Discrete soil samples were retrieved on the perimeter of the stain to establish the horizontal extent of the impact. Field screens indicate that the release spread in the subsurface or a historical(s) release was encountered as the subsurface perimeter extended beyond the visible stain.

Corrective Action Plan

The pad area will be excavated to an approximate depth of 1-2', bgs. The remediated soils will be disposed of at an NMOCD approved landfill. The excavated pad area will be backfilled with clean, non-impacted gypsum, rolled and compacted before being contoured to the surrounding area.

The impacted pasture area will be excavated to a maximum depth of four (4) feet bgs. Once the floor depth of the excavation is established, numerous discrete soil samples will be retrieved from both the floor of the excavation as well as the walls and delivered to an NMOCD approved laboratory for analyses of benzene, toluene, ethyl-benzene xylenes (BTEX), gasoline range organics (GRO), diesel range organics (DRO), oil range organics (ORO), (total petroleum hydrocarbons [TPH], and chlorides. If the laboratory analyses indicate any of the constituents of interest are above the recommended remediation action levels (RRAL) for this location (1,000 mg/kg – TPH, 50 mg/kg – BTEX, 600 mg/kg – chlorides), after delineation, a 20-mil liner will be placed to ensure percolation is limited vertically downward as well as preventing effusion upwards towards the surface. Before liner placement (if required), full delineation of each sample point will occur. (See attached Perimeter Sampling Map). The impacted soil will be removed and disposed of at an approved NMOCD facility. The pasture excavation will be backfilled with clean, non-impacted topsoil and contoured to the surrounding area.

In the event the reserve pit area is encountered during remediation, the perimeter of the reserve pit will be identified, and it will have a new liner placed with 2' of clean, non-impacted topsoil placed and contoured for drainage.

At a time conducive for germination, the location will be seeded with the preferred seed mix of the land owner free of non-noxious or invasive vegetation. The seed will be applied with either a drill or broadcast method to ensure complete coverage of affected area. The seeds will then be sown with a disc (in compacted soils), rake or a harrow.

The supporting documentation for this Corrective Action Plan is attached.

Basin appreciates the opportunity to work with you on this project. Please contact me if you have any questions or wish to discuss the site.

Sincerely,



Robbie Runnels
Project Manager
Basin Environmental Service Technologies
(575) 396-2378

Attachments:

Figure 1 – Site Location Map

Figure 2 - Area Sampling Data and Proposed Excavation

Figure 3 – Approximate Depth to Groundwater

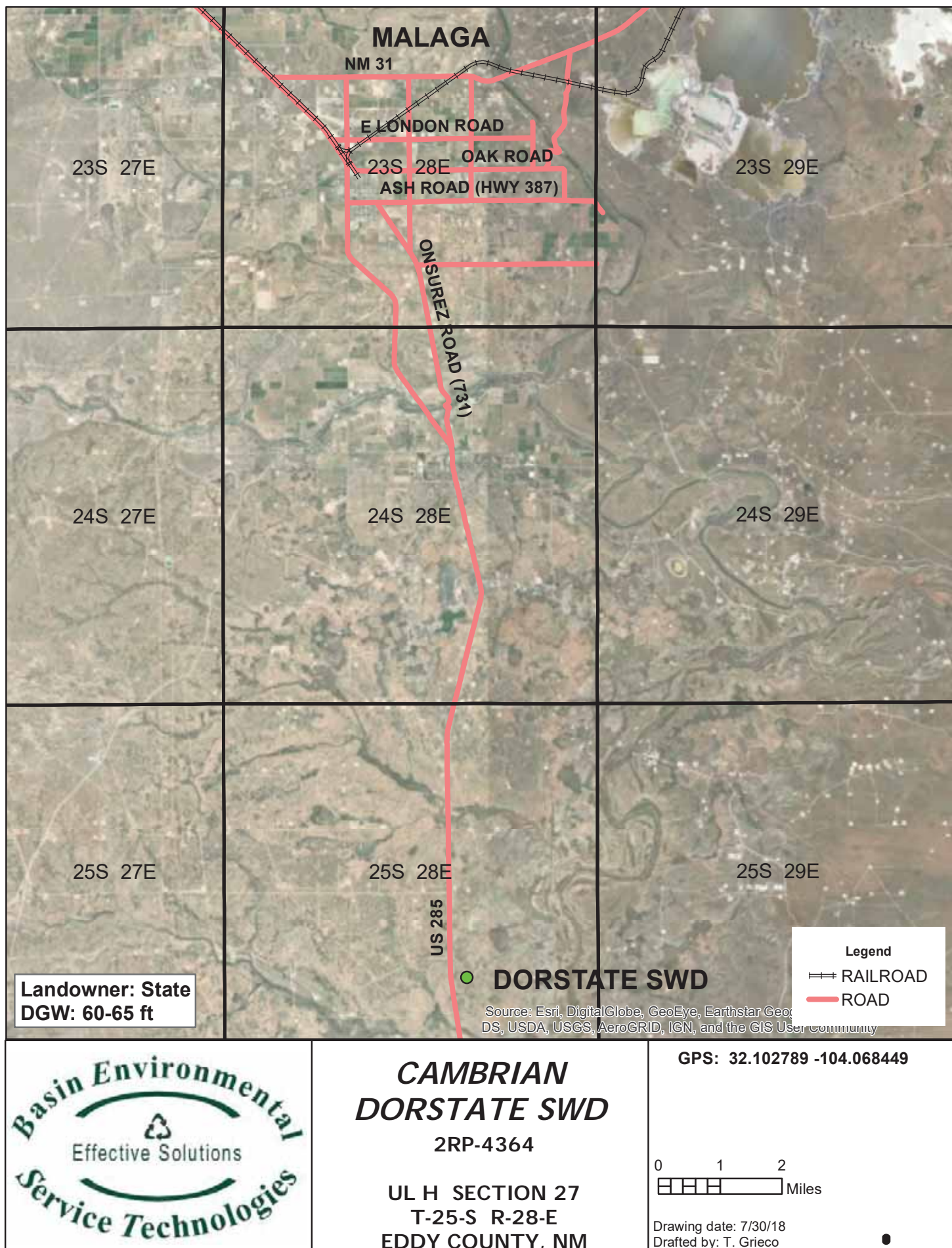
Figure 4 - Soil Chemistry Table

Appendix A – Photo Documentation

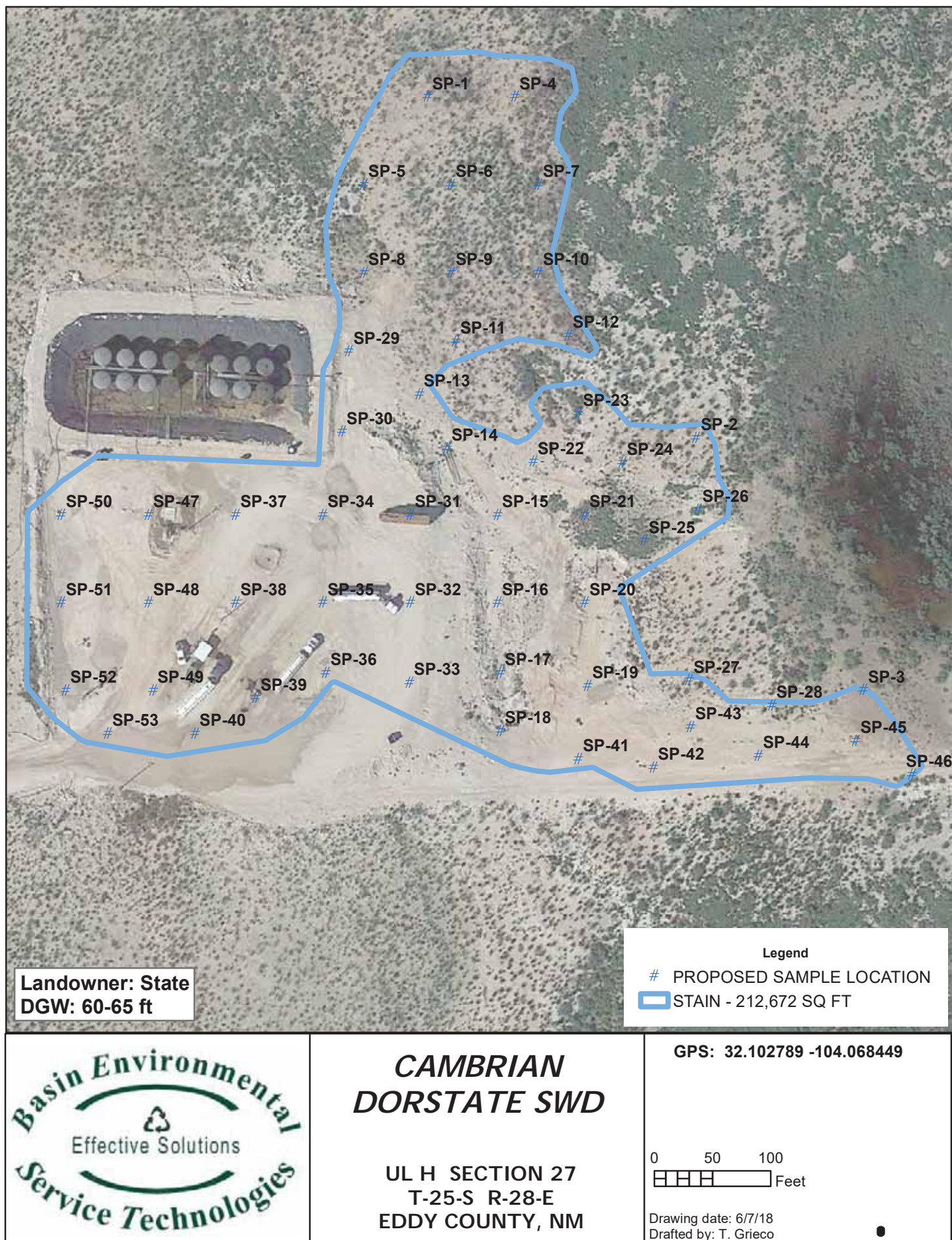
Appendix B – Initial C-141 Forms

Appendix C – Analytical Reports

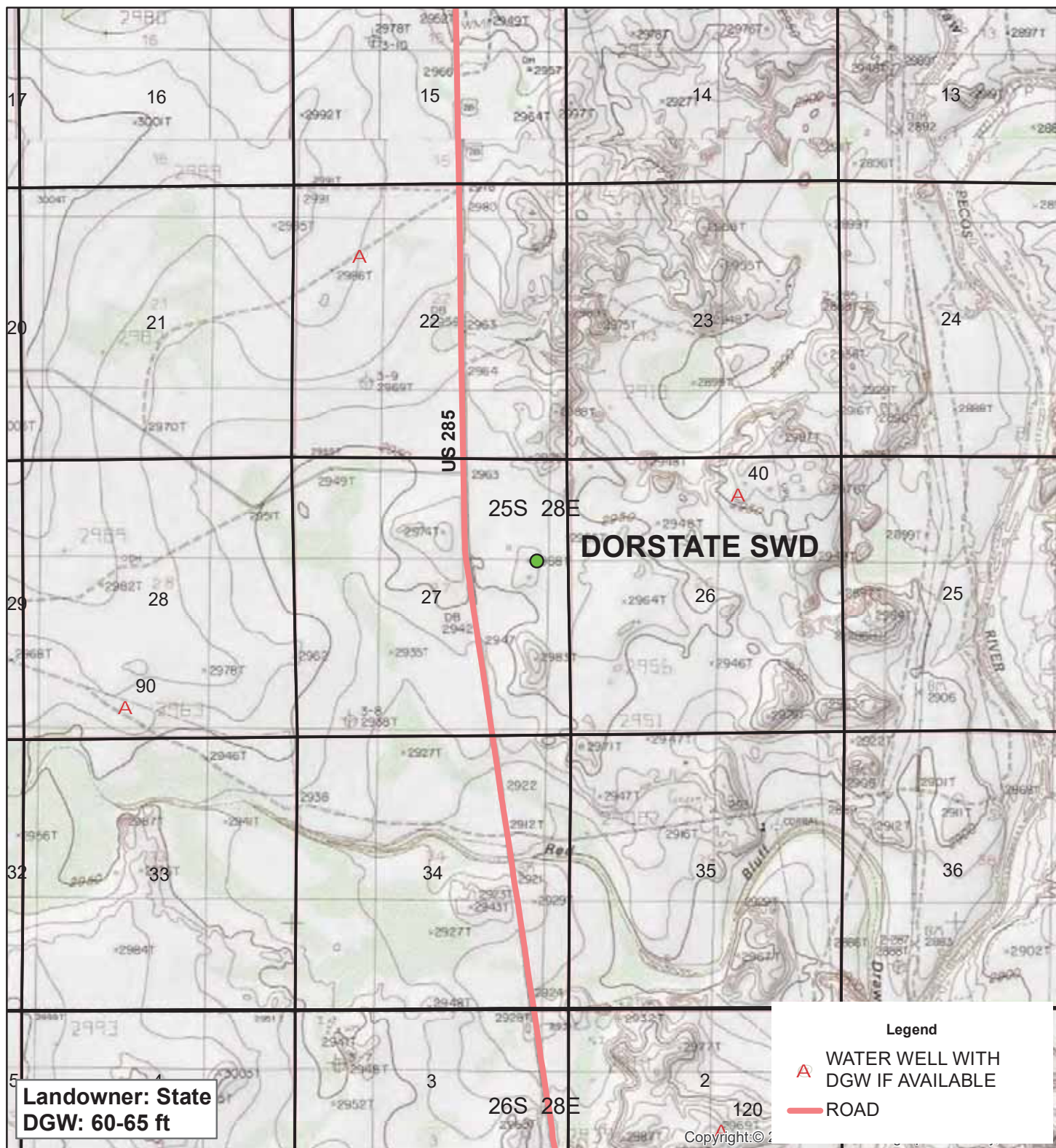
Geographic Location



Initial Sampling



Depth to Groundwater



CAMBRIAN
DORSTATE SWD
2RP-4364

UL H SECTION 27
T-25-S R-28-E
EDDY COUNTY, NM

0 0.5 1 Miles

Drawing date: 7/30/18
Drafted by: T. Grieco

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

OXY USA, INC.
DORSTATE SWD
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE #: 2RP-4364

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M				300
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	EXT DRO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
NMOCD Recommended Remediation Action Levels (RRALs)				10	NE	NE	NE	50	NE	NE	NE	1,000	600
SP-1 @ 1'	1'	3/29/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	4,030
SP-1 @ 5'	5'	3/29/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,120
SP-1 @ 9'	9'	3/29/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,610
SP-2 @ 1'	1'	3/29/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	55.7
SP-3 @ 1'	1'	3/29/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	75.1
SP-4 @ 1'	1'	4/2/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	4,740
SP-4 @ 3'	3'	4/2/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,860
SP-4 @ 5'	5'	4/2/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	850
SP-4 @ 6'	6'	4/2/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	758
SP-5 @ 1'	1'	4/2/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	4,800
SP-5 @ 3'	3'	4/2/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,900
SP-6 @ 1'	1'	4/2/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	38.3
SP-7 @ 1'	1'	4/2/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	98.4
SP-8 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	8,070
SP-9 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	119
SP-10 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	35.6
SP-11 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	29.7	<10.0	29.7	5,040
SP-12 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,450
SP-12 @ 3'	3'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,460
SP-12 @ 5'	5'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,180
SP-13 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,600

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

OXY USA, INC.
DORSTATE SWD
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE #: 2RP-4364

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M				300
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	EXT DRO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
NMOCD Recommended Remediation Action Levels (RRALs)				10	NE	NE	NE	50	NE	NE	NE	1,000	600
SP-14 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	9,180
SP-15 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	37.0	11.5	48.5	5,240
SP-16 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	269
SP-17 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,710
SP-18 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,130
SP-19 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,150
SP-20 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	31.0
SP-21 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<50.0
SP-22 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
SP-23 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	37.9
SP-24 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	20.5
SP-25 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,390
SP-26 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	292
SP-27 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	35.7	24.9	60.6	931
SP-28 @ 1'	1'	4/3/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	945
SP-29 @ 1'	1'	4/9/2018	In-Situ	-	-	-	-	-	-	-	-	-	1,310
SP-29 @ 8'	8'	4/9/2018	In-Situ	-	-	-	-	-	-	-	-	-	336

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

OXY USA, INC.
DORSTATE SWD
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE #: 2RP-4364

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M				300
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	EXT DRO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
NMOCD Recommended Remediation Action Levels (RRALs)				10	NE	NE	NE	50	NE	NE	NE	1,000	600
SP-30 @ 1'	1'	4/9/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,490
SP-30 @ 6'	6'	4/9/2018	In-Situ	-	-	-	-	-	-	-	-	-	336
SP-31 @ 1'	1'	4/9/2018	In-Situ	-	-	-	-	-	-	-	-	-	928
SP-31 @ 10'	10'	4/10/2018	In-Situ	-	-	-	-	-	-	-	-	-	944
SP-32 @ 1'	1'	4/10/2018	In-Situ	-	-	-	-	-	-	-	-	-	912
SP-32 @ 10'	10'	4/10/2018	In-Situ	-	-	-	-	-	-	-	-	-	560
SP-33 @ 1'	1'	4/10/2018	In-Situ	-	-	-	-	-	-	-	-	-	4,240
SP-33 @ 10'	10'	4/10/2018	In-Situ	-	-	-	-	-	-	-	-	-	3,800
SP-34 @ 1'	1'	4/10/2018	In-Situ	-	-	-	-	-	-	-	-	-	7,100
SP-34 @ 10'	10'	4/10/2018	In-Situ	-	-	-	-	-	-	-	-	-	1,540
SP-35 @ 1'	1'	4/10/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	97.7	38.0	136	8,200
SP-35 @ 10'	10'	4/10/2018	In-Situ	-	-	-	-	-	-	-	-	-	4,300
SP-36 @ 1'	1'	4/11/2018	In-Situ	<0.050	0.062	<0.050	1.12	1.18	38.1	1,190	216	1,444	12,000
SP-36 @ 10'	10'	4/11/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	19.2	<10.0	19.2	2,320
SP-37 @ 1'	1'	4/11/2018	In-Situ	-	-	-	-	-	-	-	-	-	5,440
SP-37 @ 10'	10'	4/11/2018	In-Situ	-	-	-	-	-	-	-	-	-	4,560
SP-38 @ 1'	1'	4/11/2018	In-Situ	-	-	-	-	-	-	-	-	-	8,800
SP-38 @ 10'	10'	4/11/2018	In-Situ	-	-	-	-	-	-	-	-	-	1,650
SP-39 @ 4'	4'	4/11/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	15,600
SP-39 @ 10'	10'	4/11/2018	In-Situ	-	-	-	-	-	-	-	-	-	7,000
SP-40 @ 1'	1'	4/11/2018	In-Situ	-	-	-	-	-	-	-	-	-	2,160
SP-40 @ 10'	10'	4/11/2018	In-Situ	-	-	-	-	-	-	-	-	-	960

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

OXY USA, INC.
DORSTATE SWD
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE #: 2RP-4364

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M				300
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	EXT DRO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
NMOCD Recommended Remediation Action Levels (RRALs)				10	NE	NE	NE	50	NE	NE	NE	1,000	600
SP-41 @ 1'	1'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	1,600
SP-41 @ 5'	5'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	368
SP-42 @ 1'	1'	4/12/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,600
SP-42 @ 6'	6'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	384
SP-43 @ 1'	1'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	2,520
SP-43 @ 10'	10'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	3,120
SP-44 @ 1'	1'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	2,280
SP-44 @ 7'	7'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	304
SP-45 @ 1'	1'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	864
SP-45 @ 3'	3'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	224
SP-46 @ 1'	1'	4/12/2018	In-Situ	-	-	-	-	-	-	-	-	-	160
SP-47 @ 1'	1'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	2,160
SP-47 @ 10'	10'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	1,090
SP-48 @ 1'	1'	4/13/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	6,320
SP-48 @ 10'	10'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	5,200
SP-49 @ 1'	1'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	8,000
SP-49 @ 10'	10'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	1,200
SP-50 @ 1'	1'	4/13/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	67.8	58.0	126	7,360
SP-50 @ 10'	10'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	3,160
SP-51 @ 1'	1'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	2,000
SP-51 @ 10'	10'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	1,020

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

OXY USA, INC.
DORSTATE SWD
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE #: 2RP-4364

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M				300
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	EXT DRO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
NMOCD Recommended Remediation Action Levels (RRALs)				10	NE	NE	NE	50	NE	NE	NE	1,000	600
SP-52 @ 1'	1'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	2,640
SP-52 @ 10'	10'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	528
SP-53 @ 1'	1'	4/13/2018	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	13.8	<10.0	13.8	5,280
SP-53 @ 10'	10'	4/13/2018	In-Situ	-	-	-	-	-	-	-	-	-	784

NE = Not established

- = Not analyzed

Concentrations in BOLD exceed NMOCD RRALs



Dorstate SWD - Release Site (Looking Northwest)



Dorstate SWD - Release Site (Looking North-Northeast)



Dorstate SWD – Release Site (Looking Northwest)



Dorstate SWD – Release Site (Looking North-Northwest)



Dorstate SWD – Release Site (Looking Northeast)



Dorstate SWD – Release Site (Looking Northwest)



Dorstate SWD – Release Site (Looking North)



Dorstate SWD – Release Site (Looking West)



Dorstate SWD – Release Site (Looking West)



Dorstate SWD – Release Site (Looking Northwest)



Dorstate SWD – Release Site (Looking North)



Dorstate SWD – Release Site (Looking Northeast)



Dorstate SWD – Release Site (Looking Northwest)



Dorstate SWD – Release Site (Looking North)



Dorstate SWD – Release Site (Looking North)



Dorstate SWD – Release Site (Looking Southwest)



Dorstate SWD – Release Site (Looking Northeast)



Dorstate SWD – Release Site (Looking Northwest)



Dorstate SWD – Release Site (Looking West-Northwest)



Dorstate SWD – Release Site (Looking West-Northwest)

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

State of New Mexico
Energy Minerals and Natural Resources

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

NM OIL CONSERVATION

ARTESIA DISTRICT

AUG 29 2017

Form C-141
Revised April 3, 2017

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

RECEIVED

Release Notification and Corrective Action

NAB1724135283 198688 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company	Cambrian Management, Ltd.	Contact	Mike Anthony
Address	PO Box 872, Midland, TX 79702	Telephone No.	432-631-4398
Facility Name	Dacstate SWD	Facility Type	SWD
Surface Owner	Mineral Owner	API No. 30-015-23728	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	27	25S	28E	1980	North	660	East	Eddy

Latitude 32.102684 Longitude 104.068565 NAD83

NATURE OF RELEASE

Type of Release	Water, Produced Water	Volume of Release	25 bbls	Volume Recovered	0
Source of Release		Date and Hour of Occurrence		Date and Hour of Discovery	8-23-17
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	8:04 PM		
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Overflowing bumps due to truck drivers inattention and excess rainwater.

We will get soil samples and Trinity Environmental and proceed with proper remediation and cleanup

Describe Area Affected and Cleanup Action Taken.*

Pasture land and SWD location

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

Signature: Denise Jones	OIL CONSERVATION DIVISION	
Printed Name: Denise Jones	Signed By: Mike Anthony Approved by Environmental Specialist	
Title: Regulatory Analyst	Approval Date: 8/29/17	Expiration Date: N/A
E-mail Address: djones@cambrianmgmt.com	Conditions of Approval: See attached	Attached: SRP-4864
Date: 8-24-17 Phone: 432-620-9181		

* Attach Additional Sheets If Necessary

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

April 11, 2018

BEN ARGUIJO

TRINITY OILFIELD SERVICES & RENTALS, LLC

P. O. BOX 2587

HOBBS, NM 88241

RE: DORSTATE SWD

Enclosed are the results of analyses for samples received by the laboratory on 04/04/18 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1 @ 1'	H800935-01	Soil	29-Mar-18 10:00	04-Apr-18 16:30
SP-1 @ 5'	H800935-02	Soil	29-Mar-18 12:00	04-Apr-18 16:30
SP-1 @ 9'	H800935-03	Soil	29-Mar-18 14:50	04-Apr-18 16:30
SP-2 @ 1'	H800935-04	Soil	29-Mar-18 13:00	04-Apr-18 16:30
SP-3 @ 1'	H800935-05	Soil	29-Mar-18 13:40	04-Apr-18 16:30
SP-4 @ 1'	H800935-06	Soil	02-Apr-18 10:30	04-Apr-18 16:30
SP-4 @ 3'	H800935-07	Soil	02-Apr-18 11:00	04-Apr-18 16:30
SP-4 @ 5'	H800935-08	Soil	02-Apr-18 11:30	04-Apr-18 16:30
SP-4 @ 6'	H800935-09	Soil	02-Apr-18 12:00	04-Apr-18 16:30
SP-5 @ 1'	H800935-10	Soil	02-Apr-18 13:00	04-Apr-18 16:30
SP-5 @ 3'	H800935-11	Soil	02-Apr-18 13:15	04-Apr-18 16:30
SP-6 @ 1'	H800935-12	Soil	02-Apr-18 14:30	04-Apr-18 16:30
SP-7 @ 1'	H800935-13	Soil	02-Apr-18 14:50	04-Apr-18 16:30
SP-8 @ 1'	H800935-14	Soil	03-Apr-18 09:00	04-Apr-18 16:30
SP-9 @ 1'	H800935-15	Soil	03-Apr-18 09:10	04-Apr-18 16:30
SP-10 @ 1'	H800935-16	Soil	03-Apr-18 09:15	04-Apr-18 16:30
SP-11 @ 1'	H800935-17	Soil	03-Apr-18 09:20	04-Apr-18 16:30
SP-12 @ 1'	H800935-18	Soil	03-Apr-18 09:30	04-Apr-18 16:30
SP-12 @ 3'	H800935-19	Soil	03-Apr-18 10:10	04-Apr-18 16:30
SP-12 @ 5'	H800935-20	Soil	03-Apr-18 10:20	04-Apr-18 16:30
SP-13 @ 1'	H800935-21	Soil	03-Apr-18 10:40	04-Apr-18 16:30
SP-14 @ 1'	H800935-22	Soil	03-Apr-18 10:45	04-Apr-18 16:30
SP-15 @ 1'	H800935-23	Soil	03-Apr-18 10:50	04-Apr-18 16:30
SP-16 @ 1'	H800935-24	Soil	03-Apr-18 10:55	04-Apr-18 16:30
SP-17 @ 1'	H800935-25	Soil	03-Apr-18 11:00	04-Apr-18 16:30
SP-18 @ 1'	H800935-26	Soil	03-Apr-18 11:05	04-Apr-18 16:30
SP-19 @ 1'	H800935-27	Soil	03-Apr-18 11:10	04-Apr-18 16:30

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-20 @ 1'	H800935-28	Soil	03-Apr-18 11:15	04-Apr-18 16:30
SP-21 @ 1'	H800935-29	Soil	03-Apr-18 11:20	04-Apr-18 16:30
SP-22 @ 1'	H800935-30	Soil	03-Apr-18 11:25	04-Apr-18 16:30
SP-23 @ 1'	H800935-31	Soil	03-Apr-18 11:30	04-Apr-18 16:30
SP-24 @ 1'	H800935-32	Soil	03-Apr-18 11:35	04-Apr-18 16:30
SP-25 @ 1'	H800935-33	Soil	03-Apr-18 11:40	04-Apr-18 16:30
SP-26 @ 1'	H800935-34	Soil	03-Apr-18 11:50	04-Apr-18 16:30
SP-27 @ 1'	H800935-35	Soil	03-Apr-18 11:55	04-Apr-18 16:30
SP-28 @ 1'	H800935-36	Soil	03-Apr-18 12:00	04-Apr-18 16:30

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-1 @ 1'
H800935-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		103 %		72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctane		80.6 %		41-142	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane		69.2 %		37.6-147	8040603	MS	06-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	4030	100	mg/kg wet	100	B804052	JDA	06-Apr-18	EPA300.0	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-1 @ 5'
H800935-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	-----------------	-------	----------	-------	---------	----------	--------	-------

Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			104 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctane			82.4 %	41-142	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			72.1 %	37.6-147	8040603	MS	06-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	2120	100	mg/kg wet	100	B804052	JDA	06-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-1 @ 9'
H800935-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			104 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctane			83.6 %	41-142	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			75.0 %	37.6-147	8040603	MS	06-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	1610	100	mg/kg wet	100	B804052	JDA	06-Apr-18	EPA300.0	
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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-2 @ 1'
H800935-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			105 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctane			82.8 %	41-142	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			74.4 %	37.6-147	8040603	MS	06-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	55.7	10.0	mg/kg wet	10	B804052	JDA	06-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-3 @ 1'
H800935-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			104 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctane			85.7 %	41-142	8040603	MS	06-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			76.2 %	37.6-147	8040603	MS	06-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	75.1	50.0	mg/kg wet	50	B804052	JDA	06-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-4 @ 1'
H800935-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			105 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
Surrogate: 1-Chlorooctane			80.2 %	41-142	8040603	MS	07-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			70.0 %	37.6-147	8040603	MS	07-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	4740	100	mg/kg wet	100	B804052	JDA	06-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-4 @ 3'
H800935-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			105 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
Surrogate: 1-Chlorooctane			82.4 %	41-142	8040603	MS	07-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			68.9 %	37.6-147	8040603	MS	07-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	1860	100	mg/kg wet	100	B804052	JDA	06-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-4 @ 5'
H800935-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			105 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
Surrogate: 1-Chlorooctane			86.1 %	41-142	8040603	MS	07-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			71.8 %	37.6-147	8040603	MS	07-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	850	50.0	mg/kg wet	50	B804052	JDA	06-Apr-18	EPA300.0	
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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-4 @ 6'
H800935-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	11-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	11-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	11-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	11-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	11-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.3 %	72-148	8040505	MS	11-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040603	MS	07-Apr-18	8015B	
Surrogate: 1-Chlorooctane			86.8 %	41-142	8040603	MS	07-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			70.2 %	37.6-147	8040603	MS	07-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	758	50.0	mg/kg wet	50	B804052	JDA	06-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-5 @ 1'
H800935-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			105 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			78.8 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			84.0 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	4800	100	mg/kg wet	100	B804052	JDA	06-Apr-18	EPA300.0	
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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-5 @ 3'
H800935-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			102 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			87.3 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			86.6 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	3900	100	mg/kg wet	100	B804052	JDA	06-Apr-18	EPA300.0	
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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-6 @ 1'
H800935-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			103 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			80.9 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			77.8 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	38.3	10.0	mg/kg wet	10	B804052	JDA	06-Apr-18	EPA300.0	
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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-7 @ 1'
H800935-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		103 %		72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane		84.2 %		41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane		82.2 %		37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	98.4	10.0	mg/kg wet	10	B804052	JDA	06-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-8 @ 1'
H800935-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			104 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			88.6 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			88.0 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	8070	200	mg/kg wet	200	B804052	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-9 @ 1'
H800935-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			104 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			85.9 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			84.3 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	119	10.0	mg/kg wet	10	B804052	JDA	06-Apr-18	EPA300.0	
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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-10 @ 1'
H800935-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		105 %		72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane		87.3 %		41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane		85.2 %		37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	35.6	10.0	mg/kg wet	10	B804052	JDA	06-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-11 @ 1'
H800935-17 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			104 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	29.7	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			88.6 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			89.7 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	5040	100	mg/kg wet	100	B804052	JDA	06-Apr-18	EPA300.0	
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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-12 @ 1'
H800935-18 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			105 %	72-148	8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			79.0 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			75.2 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	1450	50.0	mg/kg wet	50	B804052	JDA	06-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-12 @ 3'
H800935-19 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		105 %	72-148		8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane		89.4 %	41-142		8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane		95.0 %	37.6-147		8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	2460	100	mg/kg wet	100	B804052	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-12 @ 5'
H800935-20 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040505	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		105 %	72-148		8040505	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane		91.5 %	41-142		8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane		98.9 %	37.6-147		8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	1180	50.0	mg/kg wet	50	B804052	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-13 @ 1'
H800935-21 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	QR-03
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	QR-03
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			108 %	72-148	8040506	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			89.6 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			97.0 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	2600	100	mg/kg wet	100	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-14 @ 1'
H800935-22 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		109 %	72-148		8040506	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane		91.2 %	41-142		8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane		98.6 %	37.6-147		8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	9180	200	mg/kg wet	200	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-15 @ 1'
H800935-23 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			107 %	72-148	8040506	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	37.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	11.5	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			96.4 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			108 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	5240	200	mg/kg wet	200	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-16 @ 1'
H800935-24 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	05-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			108 %	72-148	8040506	MS	05-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			88.3 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			95.7 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	269	200	mg/kg wet	200	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-17 @ 1'
H800935-25 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			107 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			93.8 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			96.2 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	1710	200	mg/kg wet	200	B804053	JDA	07-Apr-18	EPA300.0	
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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-18 @ 1'
H800935-26 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			107 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			93.8 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			97.4 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	3130	100	mg/kg wet	100	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-19 @ 1'
H800935-27 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			106 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			86.3 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			91.1 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	1150	200	mg/kg wet	200	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-20 @ 1'
H800935-28 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			109 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			86.5 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			94.7 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	31.0	10.0	mg/kg wet	10	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-21 @ 1'
H800935-29 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			109 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			90.8 %	41-142	8040901	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			98.9 %	37.6-147	8040901	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	<50.0	50.0	mg/kg wet	50	B804053	JDA	07-Apr-18	EPA300.0	
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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-22 @ 1'
H800935-30 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			105 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			84.3 %	41-142	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			70.1 %	37.6-147	8040902	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	16.0	10.0	mg/kg wet	10	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-23 @ 1'
H800935-31 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			108 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			87.2 %	41-142	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			71.8 %	37.6-147	8040902	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	37.9	10.0	mg/kg wet	10	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-24 @ 1'
H800935-32 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			108 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			87.5 %	41-142	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			71.8 %	37.6-147	8040902	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	20.5	10.0	mg/kg wet	10	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-25 @ 1'
H800935-33 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		109 %		72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane		93.2 %		41-142	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane		78.5 %		37.6-147	8040902	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	2390	200	mg/kg wet	200	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-26 @ 1'
H800935-34 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			108 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			94.7 %	41-142	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			81.1 %	37.6-147	8040902	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	292	10.0	mg/kg wet	10	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-27 @ 1'
H800935-35 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			104 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
DRO >C10-C28*	35.7	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	24.9	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			91.9 %	41-142	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			94.9 %	37.6-147	8040902	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	931	200	mg/kg wet	200	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

SP-28 @ 1'
H800935-36 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Toluene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	8040506	MS	06-Apr-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			110 %	72-148	8040506	MS	06-Apr-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctane			93.0 %	41-142	8040902	MS	10-Apr-18	8015B	
Surrogate: 1-Chlorooctadecane			89.6 %	37.6-147	8040902	MS	10-Apr-18	8015B	

Green Analytical Laboratories**Soluble (DI Water Extraction)**

Chloride	945	200	mg/kg wet	200	B804053	JDA	07-Apr-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8040505 - Volatiles**Blank (8040505-BLK1)**

Prepared & Analyzed: 05-Apr-18

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							

Surrogate: 4-Bromofluorobenzene (PID) 0.103 mg/kg 0.100 103 72-148

LCS (8040505-BS1)

Prepared & Analyzed: 05-Apr-18

Benzene	2.14	0.050	mg/kg	2.00		107	79.5-124			
Toluene	2.11	0.050	mg/kg	2.00		106	75.5-127			
Ethylbenzene	2.12	0.050	mg/kg	2.00		106	77.7-125			
Total Xylenes	6.59	0.150	mg/kg	6.00		110	70.9-124			

Surrogate: 4-Bromofluorobenzene (PID) 0.101 mg/kg 0.100 101 72-148

LCS Dup (8040505-BSD1)

Prepared & Analyzed: 05-Apr-18

Benzene	2.09	0.050	mg/kg	2.00		105	79.5-124	2.15	6.5	
Toluene	2.08	0.050	mg/kg	2.00		104	75.5-127	1.45	7.02	
Ethylbenzene	2.09	0.050	mg/kg	2.00		104	77.7-125	1.57	7.83	
Total Xylenes	6.48	0.150	mg/kg	6.00		108	70.9-124	1.75	7.78	

Surrogate: 4-Bromofluorobenzene (PID) 0.103 mg/kg 0.100 103 72-148

Batch 8040506 - Volatiles**Blank (8040506-BLK1)**

Prepared & Analyzed: 05-Apr-18

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							

Surrogate: 4-Bromofluorobenzene (PID) 0.107 mg/kg 0.100 107 72-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8040506 - Volatiles**LCS (8040506-BS1)**

Prepared & Analyzed: 05-Apr-18

Benzene	1.79	0.050	mg/kg	2.00		89.5	79.5-124			
Toluene	1.87	0.050	mg/kg	2.00		93.4	75.5-127			
Ethylbenzene	1.87	0.050	mg/kg	2.00		93.7	77.7-125			
Total Xylenes	5.58	0.150	mg/kg	6.00		93.0	70.9-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.107		mg/kg	0.100		107	72-148			

LCS Dup (8040506-BS1)

Prepared & Analyzed: 05-Apr-18

Benzene	1.76	0.050	mg/kg	2.00		88.1	79.5-124	1.55	6.5	
Toluene	1.83	0.050	mg/kg	2.00		91.5	75.5-127	2.07	7.02	
Ethylbenzene	1.84	0.050	mg/kg	2.00		92.1	77.7-125	1.78	7.83	
Total Xylenes	5.48	0.150	mg/kg	6.00		91.3	70.9-124	1.83	7.78	
Surrogate: 4-Bromofluorobenzene (PID)	0.108		mg/kg	0.100		108	72-148			

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8040603 - General Prep - Organics**Blank (8040603-BLK1)**

Prepared & Analyzed: 06-Apr-18

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							

Surrogate: 1-Chlorooctane

46.5

mg/kg

50.0

92.9

41-142

Surrogate: 1-Chlorooctadecane

43.0

mg/kg

50.0

86.0

37.6-147

LCS (8040603-BS1)

Prepared & Analyzed: 06-Apr-18

GRO C6-C10	213	10.0	mg/kg	200		106	76.5-133			
DRO >C10-C28	214	10.0	mg/kg	200		107	72.9-138			
Total TPH C6-C28	427	10.0	mg/kg	400		107	78-132			

Surrogate: 1-Chlorooctane

47.1

mg/kg

50.0

94.2

41-142

Surrogate: 1-Chlorooctadecane

46.2

mg/kg

50.0

92.4

37.6-147

LCS Dup (8040603-BSD1)

Prepared & Analyzed: 06-Apr-18

GRO C6-C10	218	10.0	mg/kg	200		109	76.5-133	2.47	20.6	
DRO >C10-C28	214	10.0	mg/kg	200		107	72.9-138	0.117	20.6	
Total TPH C6-C28	432	10.0	mg/kg	400		108	78-132	1.30	18	

Surrogate: 1-Chlorooctane

48.3

mg/kg

50.0

96.6

41-142

Surrogate: 1-Chlorooctadecane

45.9

mg/kg

50.0

91.8

37.6-147

Batch 8040901 - General Prep - Organics**Blank (8040901-BLK1)**

Prepared: 09-Apr-18 Analyzed: 10-Apr-18

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							

Surrogate: 1-Chlorooctane

47.3

mg/kg

50.0

94.6

41-142

Surrogate: 1-Chlorooctadecane

46.6

mg/kg

50.0

93.1

37.6-147

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8040901 - General Prep - Organics**LCS (8040901-BS1)**

Prepared: 09-Apr-18 Analyzed: 10-Apr-18

GRO C6-C10	216	10.0	mg/kg	200		108	76.5-133			
DRO >C10-C28	229	10.0	mg/kg	200		114	72.9-138			
Total TPH C6-C28	445	10.0	mg/kg	400		111	78-132			
Surrogate: 1-Chlorooctane	47.2		mg/kg	50.0		94.4	41-142			
Surrogate: 1-Chlorooctadecane	46.8		mg/kg	50.0		93.6	37.6-147			

LCS Dup (8040901-BSD1)

Prepared: 09-Apr-18 Analyzed: 10-Apr-18

GRO C6-C10	204	10.0	mg/kg	200		102	76.5-133	5.65	20.6	
DRO >C10-C28	206	10.0	mg/kg	200		103	72.9-138	10.2	20.6	
Total TPH C6-C28	411	10.0	mg/kg	400		103	78-132	7.98	18	
Surrogate: 1-Chlorooctane	48.1		mg/kg	50.0		96.2	41-142			
Surrogate: 1-Chlorooctadecane	46.9		mg/kg	50.0		93.7	37.6-147			

Batch 8040902 - General Prep - Organics**Blank (8040902-BLK1)**

Prepared: 09-Apr-18 Analyzed: 10-Apr-18

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	46.0		mg/kg	50.0		92.0	41-142			
Surrogate: 1-Chlorooctadecane	42.6		mg/kg	50.0		85.1	37.6-147			

LCS (8040902-BS1)

Prepared: 09-Apr-18 Analyzed: 10-Apr-18

GRO C6-C10	211	10.0	mg/kg	200		106	76.5-133			
DRO >C10-C28	178	10.0	mg/kg	200		89.1	72.9-138			
Total TPH C6-C28	389	10.0	mg/kg	400		97.4	78-132			
Surrogate: 1-Chlorooctane	47.6		mg/kg	50.0		95.1	41-142			
Surrogate: 1-Chlorooctadecane	49.4		mg/kg	50.0		98.8	37.6-147			

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8040902 - General Prep - Organics**LCS Dup (8040902-BSD1)**

Prepared: 09-Apr-18 Analyzed: 10-Apr-18

GRO C6-C10	222	10.0	mg/kg	200		111	76.5-133	4.74	20.6	
DRO >C10-C28	203	10.0	mg/kg	200		102	72.9-138	13.2	20.6	
Total TPH C6-C28	425	10.0	mg/kg	400		106	78-132	8.71	18	
Surrogate: 1-Chlorooctane	47.1		mg/kg	50.0		94.2	41-142			
Surrogate: 1-Chlorooctadecane	49.8		mg/kg	50.0		99.7	37.6-147			

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
P. O. BOX 2587
HOBBS NM, 88241

Project: DORSTATE SWD
Project Number: NONE GIVEN
Project Manager: BEN ARGUIJO
Fax To: NONE

Reported:
11-Apr-18 15:38

Soluble (DI Water Extraction) - Quality Control**Green Analytical Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B804052 - General Prep - Wet Chem**Blank (B804052-BLK1)**

Prepared & Analyzed: 06-Apr-18

Chloride ND 10.0 mg/kg wet

LCS (B804052-BS1)

Prepared & Analyzed: 06-Apr-18

Chloride 229 10.0 mg/kg wet 250 91.6 85-115

LCS Dup (B804052-BSD1)

Prepared & Analyzed: 06-Apr-18

Chloride 229 10.0 mg/kg wet 250 91.5 85-115 0.170 20

Batch B804053 - General Prep - Wet Chem**Blank (B804053-BLK1)**

Prepared & Analyzed: 06-Apr-18

Chloride ND 10.0 mg/kg wet

LCS (B804053-BS1)

Prepared & Analyzed: 06-Apr-18

Chloride 227 10.0 mg/kg wet 250 90.9 85-115

LCS Dup (B804053-BSD1)

Prepared & Analyzed: 06-Apr-18

Chloride 228 10.0 mg/kg wet 250 91.4 85-115 0.597 20

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Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

Page 1 of 4

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO						ANALYSIS REQUEST								
Company Name: Trinity Oilfield Services & Rentals, LLC						P.O. #:								
Project Manager: Ben J. Angulo						Compar: Trinity								
Address: P.O. Box 2587						Attn:								
City: Hobbs						State: NM	Zip: 88241							
Phone #: (505)390-7208						Fax #:								
Project #:						Project Owner: Cambrian								
Project Name: Dorstale SWD						City:								
Project Location: Eddy Co., NM						State:	Zip:							
Sampler Name: Tristian Payne						Phone #:								
FOR LAB USE ONLY						Fax #:								
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :	ACID/BASE: ICE / COOL OTHER :	DATE	TIME	TPH (8015M)	BTEX (8021B)	Chloride (300)				
H800935	SP-1 @ 1'	G 1	X			3/29/18	1000	X	X	X				
	SP-1 @ 5'	G 1	X			3/29/18	1200	X	X	X				
	SP-1 @ 9'	G 1	X			3/29/18	1450	X	X	X				
	SP-2 @ 1'	G 1	X			3/29/18	1300	X	X	X				
	SP-3 @ 1'	G 1	X			3/29/18	1340	X	X	X				
	SP-4 @ 1'	G 1	X			4/2/18	1030	X	X	X				
	SP-4 @ 3'	G 1	X			4/2/18	1100	X	X	X				
	SP-4 @ 5'	G 1	X			4/2/18	1130	X	X	X				
	SP-4 @ 6'	G 1	X			4/2/18	1200	X	X	X				
	SP-5 @ 1'	G 1	X			4/2/18	1300	X	X	X				

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Date: 4/4/18	Received By: [Signature]	Phone Result: Yes No Add'l Phone #: _____
Time: 4:30pm	Relinquished By: [Signature]	Fax Result: Yes No Add'l Fax #: _____
Date:	Received By:	REMARKS:
Time:	Delivered By: (Circle One) Cool Intact Checked BY: [Initials] <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Please e-mail results to ben@trinityoilfieldservices.com & todd@trinityoilfieldservices.com



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Page 2 of 4

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Trinity Oilfield Services & Rentals, LLC				BILL TO	ANALYSIS REQUEST													
Project Manager: Ben J. Angujio				P.O. #:														
Address: P.O. Box 2587				Company: Trinity														
City: Hobbs	State: NM Zip: 88241			Attn:														
Phone #: (575) 390-7208	Fax #:			Address:														
Project #:	Project Owner: Cambrian			City:														
Project Name: Dorislate SMD				State:	Zip:													
Project Location: Eddy Co., NM				Phone #:														
Sampler Name: Tristan Payne				Fax #:														
<small>FOR LAB USE ONLY</small>																		
Lab I.D.	Sample I.D.	(G)/RAB OR (C)/OMP.	# CONTAINERS	MATRIX	PRESERV	SAMPLING												
				GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :														
11	SP-5 @ 3'	G 1	X			DATE	TIME	TPH (8015M)	BTEX (8021B)	Chloride (300)								
12	SP-6 @ 1'	G 1	X			4/2/18	1315	X	X	X								
13	SP-7 @ 1'	G 1	X			4/2/18	1430	X	X	X								
14	SP-8 @ 1'	G 1	X			4/2/18	1450	X	X	X								
15	SP-9 @ 1'	G 1	X			4/3/18	0900	X	X	X								
16	SP-10 @ 1'	G 1	X			4/3/18	0910	X	X	X								
17	SP-11 @ 1'	G 1	X			4/3/18	0920	X	X	X								
18	SP-12 @ 1'	G 1	X			4/3/18	0930	X	X	X								
19	SP-12 @ 3'	G 1	X			4/3/18	1010	X	X	X								
20	SP-12 @ 5'	G 1	X			4/3/18	1020	X	X	X								

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Relinquished By:	Date: 4-4-18	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Time: 4:30 PM			Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
REMARKS:				

Delivered By: (Circle One) **#75**

Sampler - UPS - Bus - Other: 5.20/5.15c

Cool Intact: ☒ Yes ☐ No ☐ No

CHECKED BY: [Signature]

Please e-mail results to ben@trinityoilfieldservices.com &
tod@trinityoilfieldservices.com

05 of 64 added



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 3 of 4

Company Name: Trinity Oilfield Services & Rentals, LLC		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: Ben J. Arguilo		Compan:		Trinity			
Address: P.O. Box 2587		City: Hobbs		State: NM Zip: 88241			
Phone #: (575)390-7208		Fax #:		Address			
Project #:		Project Owner: Cambrian		City:			
Project Name: Dorstate SWD		State:		Zip:			
Project Location: Eddy Co., NM		Phone #:		Fax #:			
Sampler Name: Tristan Payne							

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH (8015M)	BTEX (8021B)	Chloride (300)	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :						ACID/BASE:
4800935	SP-13 @ 1'	G 1	X	X								X	X	X	
82	SP-14 @ 1'	G 1	X	X								X	X	X	
83	SP-15 @ 1'	G 1	X	X								X	X	X	
84	SP-16 @ 1'	G 1	X	X								X	X	X	
85	SP-17 @ 1'	G 1	X	X								X	X	X	
86	SP-18 @ 1'	G 1	X	X								X	X	X	
87	SP-19 @ 1'	G 1	X	X								X	X	X	
88	SP-20 @ 1'	G 1	X	X								X	X	X	
89	SP-21 @ 1'	G 1	X	X								X	X	X	
90	SP-22 @ 1'	G 1	X	X								X	X	X	

Relinquished By:	Date: 4/4/18	Received By:	Date: 4/30/18
Relinquished By:	Time: 4:30p	Received By:	Time: 4:30p
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	
Sampler - UPS - Bus - Other: 5.22/5.15e	Cool Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	(Initials)	

Please e-mail results to ben@trinityoilfieldservices.com & todd@trinityoilfieldservices.com

REMARKS:

Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #:

Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #:

FORM-006
Revision 1.0

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corrected .15e

05 of 05 egsd



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

Company Name: Trinity Oilfield Services & Rentals, LLC		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: Ben J. Arguilo		Company: Trinity					
Address: P.O. Box 2587		Attn:					
City: Hobbs		State: NM Zip: 88241					
Phone #: (575)390-7208		Fax #:					
Project #:		Project Owner: Cambrian					
Project Name: Dorstate SWD		City:					
Project Location: Eddy Co., NM		State: Zip:					
Sampler Name: Tristan Payne		Phone #:					
Fax #:							

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH (8015M)	BTEX (8021B)	Chloride (300)	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:						ACID/BASE:
1800935	SP-23 @ 1'	G 1	X								4/3/18	1130	X	X	X
	SP-24 @ 1'	G 1	X								4/3/18	1135	X	X	X
	SP-25 @ 1'	G 1	X								4/3/18	1140	X	X	X
	SP-26 @ 1'	G 1	X								4/3/18	1150	X	X	X
	SP-27 @ 1'	G 1	X								4/3/18	1155	X	X	X
	SP-28 @ 1'	G 1	X								4/3/18	1200	X	X	X

Relinquished By:	Date: 4/4/18	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:
Relinquished By:	Time: 4:30 PM	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
Relinquished By:	Time:	Received By:	

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

FORM-006
Revision 1.0

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

Please e-mail results to ben@trinityoilfieldservices.com &
todd@trinityoilfieldservices.com



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

April 30, 2018

BEN ARGUIJO

TRINITY OILFIELD SERVICES & RENTALS, LLC

P. O. BOX 2587

HOBBS, NM 88241

RE: DORSTATE SWD

Enclosed are the results of analyses for samples received by the laboratory on 04/19/18 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/09/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 29 @ 1' (H801094-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1310	16.0	04/25/2018	ND	432	108	400	3.77		

Sample ID: SP- 29 @ 8' (H801094-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 30 @ 1' (H801094-03)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/23/2018	ND	2.00	100	2.00	0.705		
Toluene*	<0.050	0.050	04/23/2018	ND	2.04	102	2.00	1.64		
Ethylbenzene*	<0.050	0.050	04/23/2018	ND	2.07	104	2.00	1.34		
Total Xylenes*	<0.150	0.150	04/23/2018	ND	6.08	101	6.00	0.503		
Total BTEX	<0.300	0.300	04/23/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 72-148

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1490	16.0	04/25/2018	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

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Caley D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/09/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 30 @ 1' (H801094-03)

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/23/2018	ND	213	107	200	0.870	
DRO >C10-C28*	<10.0	10.0	04/23/2018	ND	209	104	200	2.13	
EXT DRO >C28-C36	<10.0	10.0	04/23/2018	ND					
Surrogate: 1-Chlorooctane	82.7 %	41-142							
Surrogate: 1-Chlorooctadecane	74.7 %	37.6-147							

Sample ID: SP- 30 @ 6' (H801094-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	04/25/2018	ND	432	108	400	3.77		

Sample ID: SP- 31 @ 1' (H801094-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 31 @ 10' (H801094-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	04/25/2018	ND	432	108	400	3.77	

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Caley D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/10/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 32 @ 1' (H801094-07)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 32 @ 10' (H801094-08)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 33 @ 1' (H801094-09)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4240	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 33 @ 10' (H801094-10)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3800	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 34 @ 1' (H801094-11)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7100	16.0	04/25/2018	ND	432	108	400	3.77	QM-07

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/10/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 34 @ 10' (H801094-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1540	16.0	04/25/2018	ND	432	108	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/10/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 35 @ 1' (H801094-13)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/23/2018	ND	2.13	106	2.00	2.90		
Toluene*	<0.050	0.050	04/23/2018	ND	2.09	104	2.00	2.48		
Ethylbenzene*	<0.050	0.050	04/23/2018	ND	2.07	103	2.00	4.39		
Total Xylenes*	<0.150	0.150	04/23/2018	ND	6.32	105	6.00	4.60		
Total BTEX	<0.300	0.300	04/23/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8200	16.0	04/25/2018	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/23/2018	ND	213	107	200	0.870	
DRO >C10-C28*	97.7	10.0	04/23/2018	ND	209	104	200	2.13	
EXT DRO >C28-C36	38.0	10.0	04/23/2018	ND					

Surrogate: 1-Chlorooctane 85.7 % 41-142

Surrogate: 1-Chlorooctadecane 87.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/10/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 35 @ 10' (H801094-14)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4300	16.0	04/25/2018	ND	432	108	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/11/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 36 @ 1' (H801094-15)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/23/2018	ND	2.13	106	2.00	2.90		
Toluene*	0.062	0.050	04/23/2018	ND	2.09	104	2.00	2.48		
Ethylbenzene*	<0.050	0.050	04/23/2018	ND	2.07	103	2.00	4.39		
Total Xylenes*	1.12	0.150	04/23/2018	ND	6.32	105	6.00	4.60		
Total BTEX	1.18	0.300	04/23/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 139 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	12000	16.0	04/25/2018	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	38.1	10.0	04/23/2018	ND	213	107	200	0.870	
DRO >C10-C28*	1190	10.0	04/23/2018	ND	209	104	200	2.13	
EXT DRO >C28-C36	216	10.0	04/23/2018	ND					

Surrogate: 1-Chlorooctane 88.3 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/11/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 36 @ 10' (H801094-16)

BTEX 8021B			mg/kg		Analyzed By: MS			I-02	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/27/2018	ND	2.00	100	2.00	1.95	QM-07
Toluene*	<0.050	0.050	04/27/2018	ND	1.98	98.8	2.00	2.40	
Ethylbenzene*	<0.050	0.050	04/27/2018	ND	1.93	96.3	2.00	1.74	
Total Xylenes*	<0.150	0.150	04/27/2018	ND	5.91	98.6	6.00	1.54	
Total BTEX	<0.300	0.300	04/27/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.0 % 72-148

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2320	16.0	04/25/2018	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS			I-03	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/27/2018	ND	208	104	200	0.405	
DRO >C10-C28*	19.2	10.0	04/27/2018	ND	204	102	200	0.173	
EXT DRO >C28-C36	<10.0	10.0	04/27/2018	ND					

Surrogate: 1-Chlorooctane 88.7 % 41-142

Surrogate: 1-Chlorooctadecane 76.1 % 37.6-147

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
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 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/11/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 37 @ 1' (H801094-17)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5440	16.0	04/25/2018	ND	432	108	400	3.77		

Sample ID: SP- 37 @ 10' (H801094-18)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4560	16.0	04/25/2018	ND	432	108	400	3.77		

Sample ID: SP- 38 @ 1' (H801094-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8800	16.0	04/25/2018	ND	432	108	400	3.77		

Sample ID: SP- 38 @ 10' (H801094-20)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1650	16.0	04/25/2018	ND	432	108	400	3.77		

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Analytical Results For:

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 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/11/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 39 @ 4' (H801094-21)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/23/2018	ND	2.13	106	2.00	2.90	
Toluene*	<0.050	0.050	04/23/2018	ND	2.09	104	2.00	2.48	
Ethylbenzene*	<0.050	0.050	04/23/2018	ND	2.07	103	2.00	4.39	
Total Xylenes*	<0.150	0.150	04/23/2018	ND	6.32	105	6.00	4.60	
Total BTEX	<0.300	0.300	04/23/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 72-148

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15600	16.0	04/25/2018	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/23/2018	ND	213	107	200	0.870	
DRO >C10-C28*	<10.0	10.0	04/23/2018	ND	209	104	200	2.13	
EXT DRO >C28-C36	<10.0	10.0	04/23/2018	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 82.9 % 37.6-147

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Analytical Results For:

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 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/11/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 39 @ 10' (H801094-22)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7000	16.0	04/25/2018	ND	432	108	400	3.77		

Sample ID: SP- 40 @ 1' (H801094-23)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2160	16.0	04/25/2018	ND	432	108	400	3.77		

Sample ID: SP- 40 @ 10' (H801094-24)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 41 @ 1' (H801094-25)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 41 @ 5' (H801094-26)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	04/25/2018	ND	432	108	400	3.77		

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Analytical Results For:

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 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/12/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 42 @ 1' (H801094-27)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/23/2018	ND	2.13	106	2.00	2.90	
Toluene*	<0.050	0.050	04/23/2018	ND	2.09	104	2.00	2.48	
Ethylbenzene*	<0.050	0.050	04/23/2018	ND	2.07	103	2.00	4.39	
Total Xylenes*	<0.150	0.150	04/23/2018	ND	6.32	105	6.00	4.60	
Total BTEX	<0.300	0.300	04/23/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 72-148

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	04/25/2018	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/23/2018	ND	213	107	200	0.870	
DRO >C10-C28*	<10.0	10.0	04/23/2018	ND	209	104	200	2.13	
EXT DRO >C28-C36	<10.0	10.0	04/23/2018	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 81.7 % 37.6-147

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
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 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/12/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 42 @ 6' (H801094-28)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 43 @ 1' (H801094-29)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2520	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 43 @ 10' (H801094-30)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	04/25/2018	ND	432	108	400	3.77	

Sample ID: SP- 44 @ 1' (H801094-31)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2280	16.0	04/25/2018	ND	416	104	400	3.77	QM-07	

Sample ID: SP- 44 @ 7' (H801094-32)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	04/25/2018	ND	416	104	400	3.77		

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/12/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 45 @ 1' (H801094-33)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	864	16.0	04/25/2018	ND	416	104	400	3.77	

Sample ID: SP- 45 @ 3' (H801094-34)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	04/25/2018	ND	416	104	400	3.77	

Sample ID: SP- 46 @ 1' (H801094-35)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	04/25/2018	ND	416	104	400	3.77	

Sample ID: SP- 47 @ 1' (H801094-36)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	04/25/2018	ND	416	104	400	3.77	

Sample ID: SP- 47 @ 10' (H801094-37)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	04/25/2018	ND	416	104	400	3.77	

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/13/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 48 @ 1' (H801094-38)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/23/2018	ND	2.13	106	2.00	2.90	
Toluene*	<0.050	0.050	04/23/2018	ND	2.09	104	2.00	2.48	
Ethylbenzene*	<0.050	0.050	04/23/2018	ND	2.07	103	2.00	4.39	
Total Xylenes*	<0.150	0.150	04/23/2018	ND	6.32	105	6.00	4.60	
Total BTEX	<0.300	0.300	04/23/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 72-148

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6320	16.0	04/25/2018	ND	416	104	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/23/2018	ND	213	107	200	0.870	
DRO >C10-C28*	<10.0	10.0	04/23/2018	ND	209	104	200	2.13	
EXT DRO >C28-C36	<10.0	10.0	04/23/2018	ND					

Surrogate: 1-Chlorooctane 84.5 % 41-142

Surrogate: 1-Chlorooctadecane 80.6 % 37.6-147

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Analytical Results For:

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 BEN ARGUIJO
 P. O. BOX 2587
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 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/13/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 48 @ 10' (H801094-39)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	04/25/2018	ND	416	104	400	3.77	

Sample ID: SP- 49 @ 1' (H801094-40)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8000	16.0	04/25/2018	ND	416	104	400	3.77		

Sample ID: SP- 49 @ 10' (H801094-41)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1200	16.0	04/25/2018	ND	416	104	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/13/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 50 @ 1' (H801094-42)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/23/2018	ND	2.13	106	2.00	2.90	
Toluene*	<0.050	0.050	04/23/2018	ND	2.09	104	2.00	2.48	
Ethylbenzene*	<0.050	0.050	04/23/2018	ND	2.07	103	2.00	4.39	
Total Xylenes*	<0.150	0.150	04/23/2018	ND	6.32	105	6.00	4.60	
Total BTEX	<0.300	0.300	04/23/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 72-148

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7360	16.0	04/25/2018	ND	416	104	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/23/2018	ND	213	107	200	0.870	
DRO >C10-C28*	67.8	10.0	04/23/2018	ND	209	104	200	2.13	
EXT DRO >C28-C36	58.0	10.0	04/23/2018	ND					

Surrogate: 1-Chlorooctane 67.6 % 41-142

Surrogate: 1-Chlorooctadecane 64.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/13/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 50 @ 10' (H801094-43)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3160	16.0	04/25/2018	ND	416	104	400	3.77	

Sample ID: SP- 51 @ 1' (H801094-44)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	04/25/2018	ND	416	104	400	3.77	

Sample ID: SP- 51 @ 10' (H801094-45)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1020	16.0	04/25/2018	ND	416	104	400	3.77		

Sample ID: SP- 52 @ 1' (H801094-46)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2640	16.0	04/25/2018	ND	416	104	400	3.77	

Sample ID: SP- 52 @ 10' (H801094-47)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	04/25/2018	ND	416	104	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/13/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 53 @ 1' (H801094-48)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/23/2018	ND	2.13	106	2.00	2.90	
Toluene*	<0.050	0.050	04/23/2018	ND	2.09	104	2.00	2.48	
Ethylbenzene*	<0.050	0.050	04/23/2018	ND	2.07	103	2.00	4.39	
Total Xylenes*	<0.150	0.150	04/23/2018	ND	6.32	105	6.00	4.60	
Total BTEX	<0.300	0.300	04/23/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 72-148

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5280	16.0	04/25/2018	ND	416	104	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/23/2018	ND	213	107	200	0.870	
DRO >C10-C28*	13.8	10.0	04/23/2018	ND	209	104	200	2.13	
EXT DRO >C28-C36	<10.0	10.0	04/23/2018	ND					

Surrogate: 1-Chlorooctane 84.3 % 41-142

Surrogate: 1-Chlorooctadecane 83.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
 BEN ARGUIJO
 P. O. BOX 2587
 HOBBS NM, 88241
 Fax To: NONE

Received:	04/19/2018	Sampling Date:	04/13/2018
Reported:	04/30/2018	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PERMIAN WATER SOLUTIONS - EDDY CO		

Sample ID: SP- 53 @ 10' (H801094-49)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	04/25/2018	ND	416	104	400	3.77	

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
I-03	This result was extracted outside of the EPA recommended holding time of 14 days.
I-02	This result was analyzed outside of the EPA recommended holding time.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 5

Company Name: Trinity Oilfield Services & Rentals, LLC		P.O. #: BILL TO		ANALYSIS REQUEST	
Project Manager: Ben J. Arguilo		Compan: Trinity			
Address: P.O. Box 2587		City: Hobbs		State: NM Zip: 88241	
Phone #: (575)390-7208		Fax #: 4500		City: 4500	
Project #: 4500		Project Owner: Permian Water Solutions		City: 4500	
Project Name: Dorstate S.W.D		State: 4500		Zip: 4500	
Project Location: Eddy, NM		Phone #: 4500		Fax #: 4500	
Sampler Name: Tristan Payne		FOR LAB USE ONLY			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH (8015M)	BTEX (8021B)	Chloride (300)	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :						ACID/BASE:
1	SP-29 @ 1'	G	1	X											
2	SP-29 @ 8'	G	1	X											
3	SP-30 @ 1'	G	1	X											
4	SP-30 @ 6'	G	1	X											
5	SP-31 @ 1'	G	1	X											
6	SP-31 @ 10'	G	1	X											
7	SP-32 @ 1'	G	1	X											
8	SP-32 @ 10'	G	1	X											
9	SP-33 @ 1'	G	1	X											
10	SP-33 @ 10'	G	1	X											

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Relinquished By: <i>[Signature]</i>	Received By: <i>[Signature]</i>
Date: <i>4/11/18</i>	Date: <i>4/11/18</i>
Time: <i>4:30</i>	Time: <i>4:30</i>
Relinquished By: <i>[Signature]</i>	Received By: <i>[Signature]</i>
Date: <i>4/11/18</i>	Date: <i>4/11/18</i>
Time: <i>4:30</i>	Time: <i>4:30</i>

Delivered By: (Circle One) *#15* **CHECKED BY:** *[Signature]*
 Sampler - UPS - Bus - Other: *1.10/1.05* **Sample Condition:** *[Signature]*
☐ Cool ☒ Intact ☐ Yes ☒ No

Phone Result: ☐ Yes ☐ No **Add'l Phone #:** *[Signature]*
 Fax Result: ☐ Yes ☐ No **Add'l Fax #:** *[Signature]*

REMARKS: *[Signature]*

Please e-mail results to ben@trinityoilfieldservices.com & todd@trinityoilfieldservices.com

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 5

Company Name: Trinity Oilfield Services & Rentals, LLC		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: Ben J. Anguilo		Compan: Trinity					
Address: P.O. Box 2587		Attn:					
City: Hobbs		Address:					
Phone #: (575)390-7208		City:					
Fax #:		State:					
Project #: Project Owner: Permian Water Solutions		Zip:					
Project Name: Dorstate SWD		Phone #:					
Project Location: Eddy, NM		Fax #:					
Sampler Name: Tristan Payne							

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH (8015M)	BTEX (8021B)	Chloride (300)
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
11	SP-34 @ 1'	G 1	X							4/10/18	1400			
12	SP-34 @ 10'	G 1	X							4/10/18	1445			
13	SP-35 @ 1'	G 1	X							4/10/18	1450	X		
14	SP-35 @ 10'	G 1	X							4/10/18	1535			
15	SP-36 @ 1'	G 1	X							4/11/18	1015	X		
16	SP-36 @ 10'	G 1	X							4/11/18	1100	X		
17	SP-37 @ 1'	G 1	X							4/11/18	1105			
18	SP-37 @ 10'	G G	X							4/11/18	1150			
19	SP-38 @ 1'	G G	X							4/11/18	1350			
20	SP-38 @ 10'	G G	X							4/11/18	1435			

Relinquished By:	Time:	Date:	Received By:	Time:	Date:
<i>[Signature]</i>			<i>[Signature]</i>		

Delivered By: (Circle One)	Sample Condition	CHECKED BY:
Sampler - UPS - Bus - Other: <i>#75</i>	Coor. Intact: <i>Yes</i>	<i>[Signature]</i>
<i>1.12/1.052</i>	Coor. Intact: <i>Yes</i>	<i>[Signature]</i>

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Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #:

Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #:

REMARKS:

Please e-mail results to ben@trinityoilfieldservices.com & todd@trinityoilfieldservices.com

* Added as per Ben. 4/26/18 ck

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 3 of 5

Company Name: Trinity Oilfield Services & Rentals, LLC Project Manager: Ben J. Angulo Address: P.O. Box 2587 City: Hobbs Phone #: (575)390-7208 Project #: Project Name: Dorisate SWD Project Location: Eddy, NM Sampler Name: Tristian Payne										P.O. #: Company: Trinity Attn: Address: City: State: Phone #: Fax #:		BILL TO		ANALYSIS REQUEST																									
State: NM Zip: 88241 Fax #: Project Owner: Permian Water Solutions City: State: Zip: Phone #: Fax #:										TPH (8015M) BTEX (8021B) Chloride (300)																													
FOR LAB USE ONLY										(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV		SAMPLING																					
Lab I.D.										GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:													
Sample I.D.										DATE		TIME		DATE		TIME		DATE		TIME		DATE		TIME															
H001044										21		SP-39 @ 4'		G		1		X		4/11/18		1300		X		X		X											
22										22		SP-39 @ 10'		G		1		X		4/11/18		1345		X		X		X											
23										23		SP-40 @ 1'		G		1		X		4/11/18		1440		X		X		X											
24										24		SP-40 @ 10'		G		1		X		4/11/18		1525		X		X		X											
25										25		SP-41 @ 1'		G		1		X		4/12/18		1030		X		X		X											
26										26		SP-41 @ 5'		G		1		X		4/12/18		1050		X		X		X											
27										27		SP-42 @ 1'		G		1		X		4/12/18		1100		X		X		X											
28										28		SP-42 @ 6'		G		1		X		4/12/18		1125		X		X		X											
29										29		SP-43 @ 1'		G		1		X		4/12/18		1135		X		X		X											
30										30		SP-43 @ 10'		G		1		X		4/12/18		1220		X		X		X											
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Relinquished By:										Date:		Received By:		Date:		Sample Condition		CHECKED BY:																					
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Relinquished By:										Date:		Received By:		Date:		Sample Condition		CHECKED BY:																					
Relinquished By:										Date:		Received By:		Date:																									

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 5

Company Name: Trinity Oilfield Services & Rentals, LLC		P.O. #: FILE TO		ANALYSIS REQUEST	
Project Manager: Ben J. Arguilo		Compan: Trinity			
Address: P.O. Box 2587		Attn:			
City: Hobbs		State: NM Zip: 88241			
Phone #: (575) 390-7208		Fax #:			
Project #:		Project Owner: Permian Water Solutions			
Project Name: Dorstate SWD		City:			
Project Location: Eddy, NM		State:			
Sampler Name: Tristian Payne		Phone #:			
		Fax #:			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	TPH (8015M)	BTEX (8021B)	Chloride (300)	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:						ICE / COOL
31	SP-44 @ 1'	G 1	X	X								4/12/18	1300			
32	SP-44 @ 7'	G 1	X	X								4/12/18	1330			
33	SP-45 @ 1'	G 1	X	X								4/12/18	1335			
34	SP-45 @ 3'	G 1	X	X								4/12/18	1345			
35	SP-46 @ 1'	G 1	X	X								4/12/18	1440			
36	SP-47 @ 1'	G 1	X	X								4/13/18	1000			
37	SP-47 @ 10'	G 1	X	X								4/13/18	1045			
38	SP-48 @ 1'	G G	X	X								4/13/18	1050	X		
39	SP-48 @ 10'	G G	X	X								4/13/18	1135	X		
40	SP-49 @ 1'	G G	X	X								4/13/18	1140	X		

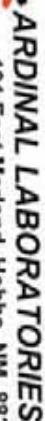
Relinquished By:	Date:	Received By:	Date:
<i>[Signature]</i>		<i>[Signature]</i>	
Relinquished By:	Date:	Received By:	Date:
<i>[Signature]</i>		<i>[Signature]</i>	

Delivered By: (Circle One) 175	Sample Condition	CHECKED BY:
Sampler - UPS - Bus - Other: 1:12 / 1:05	Cool / Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<i>[Signature]</i>
	Pres / Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Please e-mail results to ben@trinityoilfieldservices.com & todd@trinityoilfieldservices.com

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Revision 1.0

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101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

Page 5 of 5

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Trinity Offield Services & Rentals, LLC										P.O. #:									
Project Manager: Ben J. Angulo										Company: Trinity									
Address: P.O. Box 2587										Attn:									
City: Hobbs										State: NM Zip: 88241									
Phone #: (575)390-7208										Fax #:									
Project #:										Project Owner: Permian Water Solutions									
Project Name: Dorstale SWD										City:									
Project Location: Eddy, NM										State: Zip:									
Sample Name: Tristan Payne										Phone #:									
FOR LAB USE ONLY										Fax #:									

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	TPH (8015M)	BTEX (8021B)	Chloride (300)
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
41	SP-49 @ 10'	G	1	X							4/13/18	1225			
42	SP-50 @ 1'	G	1	X							4/13/18	1230	X	X	
43	SP-50 @ 10'	G	1	X							4/13/18	1315		X	
44	SP-51 @ 1'	G	1	X							4/13/18	1320		X	
45	SP-51 @ 10'	G	1	X							4/13/18	1405		X	
46	SP-52 @ 1'	G	1	X							4/13/18	1410		X	
47	SP-52 @ 10'	G	1	X							4/13/18	1455		X	
48	SP-53 @ 1'	G	G	X							4/13/18	1500	X	X	
49	SP-53 @ 10'	G	G	X							4/13/18	1545		X	

Relinquished By:		Date: 4/11/18		Received By:		Date: 4/13/18	
Relinquished By:		Date:		Received By:		Date:	
Delivered By: (Circle One)		Sample Condition		CHECKED BY:		Signature:	
Sampler - UPS - Bus - Other: 11241.050		Cool/Intact		Yes/No		Signature:	

Phone Result: ☐ Yes ☐ No **Add Phone #:**

Fax Result: ☐ Yes ☐ No **Add Fax #:**

REMARKS:

Please e-mail results to: ben@trinityoilfieldservices.com & todd@trinityoilfieldservices.com

Appendix E



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

May 28, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: DORSTATE SWD

Enclosed are the results of analyses for samples received by the laboratory on 05/14/19 16:00.

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

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP - 1 (0-1)	H901758-01	Soil	14-May-19 10:00	14-May-19 16:00
SP - 1 (2-3)	H901758-02	Soil	14-May-19 10:00	14-May-19 16:00
SP - 1 (4-5)	H901758-03	Soil	14-May-19 10:00	14-May-19 16:00
SP - 1 (6-7)	H901758-04	Soil	14-May-19 10:00	14-May-19 16:00
SP - 1 (9-10)	H901758-05	Soil	14-May-19 10:00	14-May-19 16:00
SP - 1 (14-15)	H901758-06	Soil	14-May-19 10:00	14-May-19 16:00
SP - 1 (19-20)	H901758-07	Soil	14-May-19 10:00	14-May-19 16:00
SP - 1 (24-25)	H901758-08	Soil	14-May-19 10:00	14-May-19 16:00
SP - 1 (29-30)	H901758-09	Soil	14-May-19 10:00	14-May-19 16:00
SP - 1 (34-35)	H901758-10	Soil	14-May-19 10:00	14-May-19 16:00
SP - 2 (0-1)	H901758-11	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (2-3)	H901758-12	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (4-5)	H901758-13	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (6-7)	H901758-14	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (9-10)	H901758-15	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (14-15)	H901758-16	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (19-20)	H901758-17	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (24-25)	H901758-18	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (29-30)	H901758-19	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (34-35)	H901758-20	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (39-40)	H901758-21	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (44-45)	H901758-22	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (49-50)	H901758-23	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (54-55)	H901758-24	Soil	14-May-19 11:15	14-May-19 16:00
SP - 2 (59-60)	H901758-25	Soil	14-May-19 11:15	14-May-19 16:00
SP - 3 (0-1)	H901758-26	Soil	14-May-19 14:00	14-May-19 16:00
SP - 3 (2-3)	H901758-27	Soil	14-May-19 14:00	14-May-19 16:00

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 3 (4-5)	H901758-28	Soil	14-May-19 14:00	14-May-19 16:00
SP - 3 (6-7)	H901758-29	Soil	14-May-19 14:00	14-May-19 16:00
SP - 3 (9-10)	H901758-30	Soil	14-May-19 14:00	14-May-19 16:00
SP - 3 (14-15)	H901758-31	Soil	14-May-19 14:00	14-May-19 16:00
SP - 4 (0-1)	H901758-32	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (2-3)	H901758-33	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (4-5)	H901758-34	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (6-7)	H901758-35	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (9-10)	H901758-36	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (14-15)	H901758-37	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (19-20)	H901758-38	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (24-25)	H901758-39	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (29-30)	H901758-40	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (34-35)	H901758-41	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (39-40)	H901758-42	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (44-45)	H901758-43	Soil	14-May-19 14:30	14-May-19 16:00
SP - 4 (49-50)	H901758-44	Soil	14-May-19 14:30	14-May-19 16:00

TPH added as per Clair on 05/22/19. This is the revised report and will replace the one sent on 05/21/19.

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (0-1)
H901758-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5360		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9051611	ms	16-May-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9051611	ms	16-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			95.5 %		73.3-129	9051611	ms	16-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9051515	MS	17-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9051515	MS	17-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9051515	MS	17-May-19	8015B	

Surrogate: 1-Chlorooctane			104 %		41-142	9051515	MS	17-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			88.7 %		37.6-147	9051515	MS	17-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (2-3)
H901758-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4640		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B
Toluene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B
Ethylbenzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B
Total Xylenes*	<0.150	0.150	mg/kg	50	9051611	ms	16-May-19	8021B
Total BTEX	<0.300	0.300	mg/kg	50	9051611	ms	16-May-19	8021B

Surrogate: 4-Bromofluorobenzene (PID)	95.5 %	73.3-129	9051611	ms	16-May-19	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051515	MS	17-May-19	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	9051515	MS	17-May-19	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9051515	MS	17-May-19	8015B

Surrogate: 1-Chlorooctane	71.2 %	41-142	9051515	MS	17-May-19	8015B
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Surrogate: 1-Chlorooctadecane	70.7 %	37.6-147	9051515	MS	17-May-19	8015B
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (4-5)
H901758-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1920		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (6-7)
H901758-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1200		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (9-10)**H901758-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1140		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (14-15)
H901758-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Chloride	672		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (19-20)
H901758-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	480		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (24-25)
H901758-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	400		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (29-30)
H901758-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	352		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 1 (34-35)
H901758-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	304		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (0-1)
H901758-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	7520	16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B
Toluene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B
Ethylbenzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B
Total Xylenes*	<0.150	0.150	mg/kg	50	9051611	ms	16-May-19	8021B
Total BTEX	<0.300	0.300	mg/kg	50	9051611	ms	16-May-19	8021B

Surrogate: 4-Bromofluorobenzene (PID)	94.4 %	73.3-129	9051611	ms	16-May-19	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051515	MS	17-May-19	8015B
DRO >C10-C28*	14.8	10.0	mg/kg	1	9051515	MS	17-May-19	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9051515	MS	17-May-19	8015B

Surrogate: 1-Chlorooctane	90.0 %	41-142	9051515	MS	17-May-19	8015B
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Surrogate: 1-Chlorooctadecane	91.4 %	37.6-147	9051515	MS	17-May-19	8015B
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (2-3)
H901758-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4720		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9051611	ms	16-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9051611	ms	16-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		94.7 %		73.3-129	9051611	ms	16-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051515	MS	17-May-19	8015B	
DRO >C10-C28*	51.5	10.0	mg/kg	1	9051515	MS	17-May-19	8015B	
EXT DRO >C28-C36	15.6	10.0	mg/kg	1	9051515	MS	17-May-19	8015B	

Surrogate: 1-Chlorooctane		86.0 %		41-142	9051515	MS	17-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		90.9 %		37.6-147	9051515	MS	17-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (4-5)
H901758-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2160		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (6-7)
H901758-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	624		16.0	mg/kg	4	9051705	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (9-10)**H901758-15 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1020		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	QM-07
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (14-15)
H901758-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2680		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (19-20)**H901758-17 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3360		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (24-25)
H901758-18 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3000		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (29-30)
H901758-19 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3800		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (34-35)
H901758-20 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1630		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (39-40)
H901758-21 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2240		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (44-45)
H901758-22 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2400		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (49-50)
H901758-23 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1620		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (54-55)
H901758-24 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1010		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 2 (59-60)
H901758-25 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1390		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 3 (0-1)
H901758-26 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3360		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9051611	ms	16-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9051611	ms	16-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		114 %		73.3-129	9051611	ms	16-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	30.9	10.0	mg/kg	1	9051515	MS	17-May-19	8015B	
DRO >C10-C28*	1940	10.0	mg/kg	1	9051515	MS	17-May-19	8015B	
EXT DRO >C28-C36	358	10.0	mg/kg	1	9051515	MS	17-May-19	8015B	

Surrogate: 1-Chlorooctane		93.0 %		41-142	9051515	MS	17-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		123 %		37.6-147	9051515	MS	17-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 3 (2-3)
H901758-27 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1860		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Toluene*	0.078		0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Total Xylenes*	3.47		0.150	mg/kg	50	9051611	ms	16-May-19	8021B	
Total BTEX	3.54		0.300	mg/kg	50	9051611	ms	16-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			107 %		73.3-129	9051611	ms	16-May-19	8021B	
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Petroleum Hydrocarbons by GC FID**S-04**

GRO C6-C10*	669		10.0	mg/kg	1	9051714	MS	17-May-19	8015B	
DRO >C10-C28*	9200		10.0	mg/kg	1	9051714	MS	17-May-19	8015B	QM-07
EXT DRO >C28-C36	1120		10.0	mg/kg	1	9051714	MS	17-May-19	8015B	

Surrogate: 1-Chlorooctane			199 %		41-142	9051714	MS	17-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			320 %		37.6-147	9051714	MS	17-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 3 (4-5)
H901758-28 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1490		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID**S-04**

GRO C6-C10*	115		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
DRO >C10-C28*	2470		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	QM-07
EXT DRO >C28-C36	264		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			164 %	41-142		9052208	MS	23-May-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			139 %	37.6-147		9052208	MS	23-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 3 (6-7)
H901758-29 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1120		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
DRO >C10-C28*	703		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
EXT DRO >C28-C36	34.2		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	

Surrogate: 1-Chlorooctane			114 %	41-142		9052208	MS	23-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			108 %	37.6-147		9052208	MS	23-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 3 (9-10)**H901758-30 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	624		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
DRO >C10-C28*	99.8		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	

Surrogate: 1-Chlorooctane			96.3 %	41-142		9052208	MS	23-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			101 %	37.6-147		9052208	MS	23-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 3 (14-15)
H901758-31 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	480		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
DRO >C10-C28*	35.7		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	

Surrogate: 1-Chlorooctane			100 %	41-142		9052208	MS	23-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			106 %	37.6-147		9052208	MS	23-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (0-1)
H901758-32 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	11300		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9051611	ms	16-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9051611	ms	16-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9051611	ms	16-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		95.1 %		73.3-129	9051611	ms	16-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051714	MS	17-May-19	8015B	
DRO >C10-C28*	647	10.0	mg/kg	1	9051714	MS	17-May-19	8015B	
EXT DRO >C28-C36	397	10.0	mg/kg	1	9051714	MS	17-May-19	8015B	

Surrogate: 1-Chlorooctane		92.8 %		41-142	9051714	MS	17-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		130 %		37.6-147	9051714	MS	17-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (2-3)
H901758-33 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5440		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9051701	ms	17-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9051701	ms	17-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9051701	ms	17-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9051701	ms	17-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9051701	ms	17-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		98.4 %		73.3-129	9051701	ms	17-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051714	MS	17-May-19	8015B	
DRO >C10-C28*	80.1	10.0	mg/kg	1	9051714	MS	17-May-19	8015B	
EXT DRO >C28-C36	50.0	10.0	mg/kg	1	9051714	MS	17-May-19	8015B	

Surrogate: 1-Chlorooctane		92.5 %		41-142	9051714	MS	17-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		102 %		37.6-147	9051714	MS	17-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (4-5)
H901758-34 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5280		16.0	mg/kg	4	9052116	AC	21-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052208	MS	23-May-19	8015B	
Surrogate: 1-Chlorooctane			97.4 %	41-142		9052208	MS	23-May-19	8015B	
Surrogate: 1-Chlorooctadecane			101 %	37.6-147		9052208	MS	23-May-19	8015B	

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (6-7)
H901758-35 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3680		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	QM-07
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052213	MS	22-May-19	8015B	
DRO >C10-C28*	23.6		10.0	mg/kg	1	9052213	MS	22-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052213	MS	22-May-19	8015B	

Surrogate: 1-Chlorooctane 90.7 % 41-142 9052213 MS 22-May-19 8015B

Surrogate: 1-Chlorooctadecane 101 % 37.6-147 9052213 MS 22-May-19 8015B

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (9-10)**H901758-36 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1810		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052213	MS	22-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9052213	MS	22-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052213	MS	22-May-19	8015B	

Surrogate: 1-Chlorooctane			87.8 %		41-142	9052213	MS	22-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			93.9 %		37.6-147	9052213	MS	22-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (14-15)
H901758-37 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1150		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052213	MS	22-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9052213	MS	22-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052213	MS	22-May-19	8015B	
Surrogate: 1-Chlorooctane			83.8 %	41-142		9052213	MS	22-May-19	8015B	
Surrogate: 1-Chlorooctadecane			90.0 %	37.6-147		9052213	MS	22-May-19	8015B	

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (19-20)
H901758-38 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1420		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

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901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
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Reported:
28-May-19 13:43

SP - 4 (24-25)
H901758-39 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1760		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (29-30)
H901758-40 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2080		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (34-35)
H901758-41 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	736		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (39-40)
H901758-42 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1120		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (44-45)
H901758-43 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	544		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

SP - 4 (49-50)
H901758-44 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1630		16.0	mg/kg	4	9051702	AC	21-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9051702 - 1:4 DI Water										
Blank (9051702-BLK1)				Prepared & Analyzed: 17-May-19						
Chloride	ND	16.0	mg/kg							
LCS (9051702-BS1)				Prepared & Analyzed: 17-May-19						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (9051702-BSD1)				Prepared & Analyzed: 17-May-19						
Chloride	384	16.0	mg/kg	400		96.0	80-120	4.08	20	
Batch 9051705 - 1:4 DI Water										
Blank (9051705-BLK1)				Prepared & Analyzed: 17-May-19						
Chloride	ND	16.0	mg/kg							
LCS (9051705-BS1)				Prepared & Analyzed: 17-May-19						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (9051705-BSD1)				Prepared & Analyzed: 17-May-19						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	
Batch 9052116 - 1:4 DI Water										
Blank (9052116-BLK1)				Prepared & Analyzed: 21-May-19						
Chloride	ND	16.0	mg/kg							
LCS (9052116-BS1)				Prepared & Analyzed: 21-May-19						
Chloride	416	16.0	mg/kg	400		104	80-120			

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9052116 - 1:4 DI Water**LCS Dup (9052116-BSD1)**

Prepared & Analyzed: 21-May-19

Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9051611 - Volatiles**Blank (9051611-BLK1)**

Prepared & Analyzed: 16-May-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							

Surrogate: 4-Bromofluorobenzene (PID) 0.0963 mg/kg 0.100 96.3 73.3-129

LCS (9051611-BS1)

Prepared & Analyzed: 16-May-19

Benzene	1.97	0.050	mg/kg	2.00		98.3	72.2-131			
Toluene	2.09	0.050	mg/kg	2.00		104	71.7-126			
Ethylbenzene	1.99	0.050	mg/kg	2.00		99.5	68.9-126			
Total Xylenes	6.00	0.150	mg/kg	6.00		99.9	71.4-125			

Surrogate: 4-Bromofluorobenzene (PID) 0.0926 mg/kg 0.100 92.6 73.3-129

LCS Dup (9051611-BSD1)

Prepared & Analyzed: 16-May-19

Benzene	1.89	0.050	mg/kg	2.00		94.4	72.2-131	4.04	6.91	
Toluene	2.04	0.050	mg/kg	2.00		102	71.7-126	2.16	7.12	
Ethylbenzene	1.95	0.050	mg/kg	2.00		97.4	68.9-126	2.17	7.88	
Total Xylenes	5.87	0.150	mg/kg	6.00		97.8	71.4-125	2.13	7.46	

Surrogate: 4-Bromofluorobenzene (PID) 0.0918 mg/kg 0.100 91.8 73.3-129

Batch 9051701 - Volatiles**Blank (9051701-BLK1)**

Prepared & Analyzed: 17-May-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							

Surrogate: 4-Bromofluorobenzene (PID) 0.0982 mg/kg 0.100 98.2 73.3-129

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9051701 - Volatiles**LCS (9051701-BS1)**

Prepared & Analyzed: 17-May-19

Benzene	1.98	0.050	mg/kg	2.00		98.9	72.2-131			
Toluene	2.14	0.050	mg/kg	2.00		107	71.7-126			
Ethylbenzene	2.05	0.050	mg/kg	2.00		103	68.9-126			
Total Xylenes	6.18	0.150	mg/kg	6.00		103	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0962		mg/kg	0.100		96.2	73.3-129			

LCS Dup (9051701-BS1)

Prepared & Analyzed: 17-May-19

Benzene	1.97	0.050	mg/kg	2.00		98.5	72.2-131	0.479	6.91	
Toluene	2.11	0.050	mg/kg	2.00		106	71.7-126	1.37	7.12	
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	68.9-126	0.643	7.88	
Total Xylenes	6.18	0.150	mg/kg	6.00		103	71.4-125	0.0911	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	0.0947		mg/kg	0.100		94.7	73.3-129			

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9051515 - General Prep - Organics**Blank (9051515-BLK1)**

Prepared: 15-May-19 Analyzed: 17-May-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	51.7		mg/kg	50.0		103	41-142			
Surrogate: 1-Chlorooctadecane	53.7		mg/kg	50.0		107	37.6-147			

LCS (9051515-BS1)

Prepared: 15-May-19 Analyzed: 17-May-19

GRO C6-C10	193	10.0	mg/kg	200		96.6	76.5-133			
DRO >C10-C28	189	10.0	mg/kg	200		94.7	72.9-138			
Total TPH C6-C28	382	10.0	mg/kg	400		95.6	78-132			
Surrogate: 1-Chlorooctane	55.1		mg/kg	50.0		110	41-142			
Surrogate: 1-Chlorooctadecane	55.0		mg/kg	50.0		110	37.6-147			

LCS Dup (9051515-BS1)

Prepared: 15-May-19 Analyzed: 17-May-19

GRO C6-C10	202	10.0	mg/kg	200		101	76.5-133	4.25	20.6	
DRO >C10-C28	194	10.0	mg/kg	200		97.2	72.9-138	2.64	20.6	
Total TPH C6-C28	396	10.0	mg/kg	400		99.0	78-132	3.46	18	
Surrogate: 1-Chlorooctane	55.5		mg/kg	50.0		111	41-142			
Surrogate: 1-Chlorooctadecane	54.8		mg/kg	50.0		110	37.6-147			

Batch 9051714 - General Prep - Organics**Blank (9051714-BLK1)**

Prepared & Analyzed: 17-May-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	48.7		mg/kg	50.0		97.4	41-142			
Surrogate: 1-Chlorooctadecane	50.7		mg/kg	50.0		101	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9051714 - General Prep - Organics**LCS (9051714-BS1)**

Prepared & Analyzed: 17-May-19

GRO C6-C10	201	10.0	mg/kg	200		100	76.5-133			
DRO >C10-C28	184	10.0	mg/kg	200		92.0	72.9-138			
Total TPH C6-C28	385	10.0	mg/kg	400		96.2	78-132			
Surrogate: 1-Chlorooctane	53.5		mg/kg	50.0		107	41-142			
Surrogate: 1-Chlorooctadecane	53.6		mg/kg	50.0		107	37.6-147			

LCS Dup (9051714-BSD1)

Prepared & Analyzed: 17-May-19

GRO C6-C10	198	10.0	mg/kg	200		99.2	76.5-133	1.20	20.6	
DRO >C10-C28	189	10.0	mg/kg	200		94.4	72.9-138	2.57	20.6	
Total TPH C6-C28	387	10.0	mg/kg	400		96.8	78-132	0.619	18	
Surrogate: 1-Chlorooctane	54.2		mg/kg	50.0		108	41-142			
Surrogate: 1-Chlorooctadecane	53.9		mg/kg	50.0		108	37.6-147			

Batch 9052208 - General Prep - Organics**Blank (9052208-BLK1)**

Prepared: 22-May-19 Analyzed: 23-May-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	46.5		mg/kg	50.0		93.0	41-142			
Surrogate: 1-Chlorooctadecane	47.2		mg/kg	50.0		94.4	37.6-147			

LCS (9052208-BS1)

Prepared: 22-May-19 Analyzed: 23-May-19

GRO C6-C10	192	10.0	mg/kg	200		96.2	76.5-133			
DRO >C10-C28	197	10.0	mg/kg	200		98.6	72.9-138			
Total TPH C6-C28	390	10.0	mg/kg	400		97.4	78-132			
Surrogate: 1-Chlorooctane	52.5		mg/kg	50.0		105	41-142			
Surrogate: 1-Chlorooctadecane	50.7		mg/kg	50.0		101	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
28-May-19 13:43

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 9052208 - General Prep - Organics**LCS Dup (9052208-BSD1)**

Prepared: 22-May-19 Analyzed: 23-May-19

GRO C6-C10	193	10.0	mg/kg	200		96.4	76.5-133	0.220	20.6
DRO >C10-C28	200	10.0	mg/kg	200		99.8	72.9-138	1.17	20.6
Total TPH C6-C28	392	10.0	mg/kg	400		98.1	78-132	0.703	18
Surrogate: 1-Chlorooctane	51.2		mg/kg	50.0		102	41-142		
Surrogate: 1-Chlorooctadecane	49.3		mg/kg	50.0		98.6	37.6-147		

Batch 9052213 - General Prep - Organics**Blank (9052213-BLK1)**

Prepared & Analyzed: 22-May-19

GRO C6-C10	ND	10.0	mg/kg						
DRO >C10-C28	ND	10.0	mg/kg						
EXT DRO >C28-C36	ND	10.0	mg/kg						
Surrogate: 1-Chlorooctane	43.7		mg/kg	50.0		87.4	41-142		
Surrogate: 1-Chlorooctadecane	47.2		mg/kg	50.0		94.4	37.6-147		

LCS (9052213-BS1)

Prepared & Analyzed: 22-May-19

GRO C6-C10	185	10.0	mg/kg	200		92.6	76.5-133		
DRO >C10-C28	224	10.0	mg/kg	200		112	72.9-138		
Total TPH C6-C28	410	10.0	mg/kg	400		102	78-132		
Surrogate: 1-Chlorooctane	46.8		mg/kg	50.0		93.6	41-142		
Surrogate: 1-Chlorooctadecane	49.9		mg/kg	50.0		99.7	37.6-147		

LCS Dup (9052213-BSD1)

Prepared & Analyzed: 22-May-19

GRO C6-C10	183	10.0	mg/kg	200		91.5	76.5-133	1.14	20.6
DRO >C10-C28	244	10.0	mg/kg	200		122	72.9-138	8.14	20.6
Total TPH C6-C28	427	10.0	mg/kg	400		107	78-132	4.05	18
Surrogate: 1-Chlorooctane	45.4		mg/kg	50.0		90.8	41-142		
Surrogate: 1-Chlorooctadecane	49.7		mg/kg	50.0		99.5	37.6-147		

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

ANALYSIS REQUEST

Released to Imaging: 7/29/2021 3:19:33 PM



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: _____		P.O. #: _____		BILL TO										ANALYSIS REQUEST																									
Project Manager: _____		Company: <u>Tedac Tech</u>																																					
Address: _____		Attn: _____																																					
City: _____ State: _____ Zip: _____		Address: _____																																					
Phone #: _____ Fax #: _____		City: _____																																					
Project #: _____ Project Owner: <u>PWS</u>		State: _____ Zip: _____																																					
Project Location: <u>Edley Co. W</u>		Phone #: _____																																					
Sampler Name: <u>Phil Hunt</u>		Fax #: _____																																					
FOR LAB USE ONLY		PRESERV		SAMPLING																																			
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME											
H901758		SP-2 (10-1)		1		1		X		X		X		X		X		X		X		X		X		5/14		11:15		C Worlidge									
11		(2-3)		1		1		X		X		X		X		X		X		X		X		X						TEST									
12		(14-5)		1		1		X		X		X		X		X		X		X		X		X						TPI									
13		(6-7)		1		1		X		X		X		X		X		X		X		X		X															
14		(9-10)		1		1		X		X		X		X		X		X		X		X		X															
15		(14-15)		1		1		X		X		X		X		X		X		X		X		X															
16		(19-20)		1		1		X		X		X		X		X		X		X		X		X															
17		(24-25)		1		1		X		X		X		X		X		X		X		X		X															
18		(24-30)		1		1		X		X		X		X		X		X		X		X		X															
19		(34-35)		1		1		X		X		X		X		X		X		X		X		X															
20				1		1		X		X		X		X		X		X		X		X		X															
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101 East Marland, Hobbs, NM 88240
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09 of 09 ead



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u> </u>		BILL TO		ANALYSIS REQUEST																																							
Project Manager: <u> </u>		P.O. #: <u> </u>																																									
Address: <u> </u>		Company: <u>Ida Tech</u>																																									
City: <u> </u> State: <u> </u> Zip: <u> </u>		Attn: <u> </u>																																									
Phone #: <u> </u> Fax #: <u> </u>		Address: <u> </u>																																									
Project #: <u>212C-40-01743</u> Project Owner: <u>PWS</u>		City: <u> </u>																																									
Project Name: <u>Docket SWD</u>		State: <u> </u> Zip: <u> </u>																																									
Project Location: <u>Eddy Co. NM</u>		Phone #: <u> </u>																																									
Sampler Name: <u>Chief Sheriff</u>		Fax #: <u> </u>																																									
FOR LAB USE ONLY		PRESERV		SAMPLING																																							
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME															
H901758		SP-4 (34-35)				1		X				X														5/14		14:30		X													
42		(35-40)				1		X				X														5/14		14:30		X													
43		(44-45)				1		X				X														5/14		14:30		X													
44		(44-50)				1		X				X														5/14		14:30		X													

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Relinquished By: Date: 5-14-19 Time: 16:00 Received By: Shawna Dlatky

Relinquished By: Date: Time: Received By:

Delivered By: (Circle One) 4.0e' #97 Sample Condition ☒ Cool ☐ Intact ☐ Yes ☐ No ☐ Yes ☐ No CHECKED BY: (Initials)

Sampler - UPS - Bus - Other:

REMARKS:

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:



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

May 28, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: DORSTATE SWD

Enclosed are the results of analyses for samples received by the laboratory on 05/17/19 14:00.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 6 (0-1) (H901800-01)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/22/2019	ND	2.07	103	2.00	4.22		
Toluene*	<0.050	0.050	05/22/2019	ND	2.06	103	2.00	1.00		
Ethylbenzene*	<0.050	0.050	05/22/2019	ND	1.99	99.5	2.00	1.14		
Total Xylenes*	<0.150	0.150	05/22/2019	ND	5.98	99.7	6.00	1.60		
Total BTEX	<0.300	0.300	05/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 73.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1380	16.0	05/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	179	89.5	200	12.1	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	183	91.4	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 90.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 6 (2-3) (H901800-02)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	2.07	103	2.00	4.22	
Toluene*	<0.050	0.050	05/21/2019	ND	2.06	103	2.00	1.00	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.99	99.5	2.00	1.14	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.98	99.7	6.00	1.60	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.3 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	05/22/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	179	89.5	200	12.1	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	183	91.4	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 83.5 % 41-142

Surrogate: 1-Chlorooctadecane 85.4 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 6 (4-5) (H901800-03)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 6 (6-7) (H901800-04)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 6 (9-10) (H901800-05)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1470	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 6 (14-15) (H901800-06)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1330	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 6 (19-20) (H901800-07)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	05/22/2019	ND	400	100	400	0.00	QM-07

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 6 (24-25) (H901800-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	05/22/2019	ND	400	100	400	0.00		

Sample ID: SP - 6 (29-30) (H901800-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	688	16.0	05/22/2019	ND	400	100	400	0.00		

Sample ID: SP - 6 (34-35) (H901800-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 6 (39-40) (H901800-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	05/22/2019	ND	400	100	400	0.00		

Sample ID: SP - 6 (44-45) (H901800-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	05/22/2019	ND	400	100	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/15/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 7 (0-1) (H901800-13)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	2.07	103	2.00	4.22	
Toluene*	<0.050	0.050	05/21/2019	ND	2.06	103	2.00	1.00	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.99	99.5	2.00	1.14	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.98	99.7	6.00	1.60	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 80.3 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5920	16.0	05/22/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	179	89.5	200	12.1	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	183	91.4	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 80.6 % 41-142

Surrogate: 1-Chlorooctadecane 83.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 7 (2-3) (H901800-14)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/22/2019	ND	2.07	103	2.00	4.22		
Toluene*	<0.050	0.050	05/22/2019	ND	2.06	103	2.00	1.00		
Ethylbenzene*	<0.050	0.050	05/22/2019	ND	1.99	99.5	2.00	1.14		
Total Xylenes*	<0.150	0.150	05/22/2019	ND	5.98	99.7	6.00	1.60		
Total BTEX	<0.300	0.300	05/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3680	16.0	05/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	179	89.5	200	12.1	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	183	91.4	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 96.5 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 7 (4-5) (H901800-15)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1840	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 7 (6-7) (H901800-16)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 7 (9-10) (H901800-17)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 7 (14-15) (H901800-18)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 7 (19-20) (H901800-19)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	05/22/2019	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/15/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 7 (24-25) (H901800-20)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 7 (29-30) (H901800-21)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	05/22/2019	ND	400	100	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/15/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 8 (0-1) (H901800-22)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/21/2019	ND	2.07	103	2.00	4.22		
Toluene*	<0.050	0.050	05/21/2019	ND	2.06	103	2.00	1.00		
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.99	99.5	2.00	1.14		
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.98	99.7	6.00	1.60		
Total BTEx	<0.300	0.300	05/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3040	16.0	05/22/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	188	94.0	200	6.52	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	224	112	200	8.64	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 87.5 % 41-142

Surrogate: 1-Chlorooctadecane 95.0 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 8 (2-3) (H901800-23)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/24/2019	ND	2.07	103	2.00	4.22		
Toluene*	<0.050	0.050	05/24/2019	ND	2.06	103	2.00	1.00		
Ethylbenzene*	<0.050	0.050	05/24/2019	ND	1.99	99.5	2.00	1.14		
Total Xylenes*	<0.150	0.150	05/24/2019	ND	5.98	99.7	6.00	1.60		
Total BTEX	<0.300	0.300	05/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1280	16.0	05/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	188	94.0	200	6.52	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	224	112	200	8.64	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 8 (4-5) (H901800-24)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1650	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 8 (6-7) (H901800-25)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	864	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 8 (9-10) (H901800-26)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1880	16.0	05/22/2019	ND	400	100	400	0.00	

Sample ID: SP - 8 (14-15) (H901800-27)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	05/22/2019	ND	416	104	400	3.77	QM-07

Sample ID: SP - 8 (19-20) (H901800-28)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3160	16.0	05/22/2019	ND	416	104	400	3.77	

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 8 (24-25) (H901800-29)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3040	16.0	05/22/2019	ND	416	104	400	3.77		

Sample ID: SP - 8 (29-30) (H901800-30)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	05/22/2019	ND	416	104	400	3.77	

Sample ID: SP - 8 (34-35) (H901800-31)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3720	16.0	05/22/2019	ND	416	104	400	0.00		

Sample ID: SP - 8 (39-40) (H901800-32)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5360	16.0	05/22/2019	ND	416	104	400	0.00	

Sample ID: SP - 8 (44-45) (H901800-33)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4560	16.0	05/22/2019	ND	416	104	400	0.00		

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 8 (49-50) (H901800-34)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5840	16.0	05/22/2019	ND	416	104	400	0.00	

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/15/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 9 (0-1) (H901800-35)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	2.07	103	2.00	4.22	
Toluene*	<0.050	0.050	05/21/2019	ND	2.06	103	2.00	1.00	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.99	99.5	2.00	1.14	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	5.98	99.7	6.00	1.60	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7600	16.0	05/22/2019	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	188	94.0	200	6.52	
DRO >C10-C28*	59.2	10.0	05/21/2019	ND	224	112	200	8.64	
EXT DRO >C28-C36	19.8	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 85.9 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 9 (2-3) (H901800-36)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/24/2019	ND	1.82	91.1	2.00	0.868		
Toluene*	<0.050	0.050	05/24/2019	ND	1.81	90.3	2.00	4.41		
Ethylbenzene*	<0.050	0.050	05/24/2019	ND	1.71	85.4	2.00	3.94		
Total Xylenes*	<0.150	0.150	05/24/2019	ND	4.85	80.9	6.00	7.20		
Total BTEX	<0.300	0.300	05/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3280	16.0	05/22/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 91.8 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 9 (4-5) (H901800-37)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2680	16.0	05/22/2019	ND	416	104	400	0.00	

Sample ID: SP - 9 (6-7) (H901800-38)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	05/22/2019	ND	416	104	400	0.00	

Sample ID: SP - 9 (9-10) (H901800-39)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1220	16.0	05/22/2019	ND	416	104	400	0.00	

Sample ID: SP - 9 (14-15) (H901800-40)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1420	16.0	05/22/2019	ND	416	104	400	0.00	

Sample ID: SP - 9 (19-20) (H901800-41)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	05/22/2019	ND	416	104	400	0.00	

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 9 (24-25) (H901800-42)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3440	16.0	05/22/2019	ND	416	104	400	0.00		

Sample ID: SP - 9 (29-30) (H901800-43)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3040	16.0	05/22/2019	ND	416	104	400	0.00	

Sample ID: SP - 9 (34-35) (H901800-44)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4120	16.0	05/22/2019	ND	416	104	400	0.00		

Sample ID: SP - 9 (39-40) (H901800-45)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3520	16.0	05/22/2019	ND	416	104	400	0.00		

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 14 (0-1) (H901800-46)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/24/2019	ND	1.82	91.1	2.00	0.868		
Toluene*	<0.050	0.050	05/24/2019	ND	1.81	90.3	2.00	4.41		
Ethylbenzene*	<0.050	0.050	05/24/2019	ND	1.71	85.4	2.00	3.94		
Total Xylenes*	<0.150	0.150	05/24/2019	ND	4.85	80.9	6.00	7.20		
Total BTEX	<0.300	0.300	05/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8000	16.0	05/23/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	87.9	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	39.1	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 92.6 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 14 (2-3) (H901800-47)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/21/2019	ND	1.82	91.1	2.00	0.868		
Toluene*	<0.050	0.050	05/21/2019	ND	1.81	90.3	2.00	4.41		
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.4	2.00	3.94		
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.85	80.9	6.00	7.20		
Total BTEX	<0.300	0.300	05/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 77.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4600	16.0	05/23/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 92.4 % 41-142

Surrogate: 1-Chlorooctadecane 93.5 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 14 (4-5) (H901800-48)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3960	16.0	05/23/2019	ND	416	104	400	0.00	

Sample ID: SP - 14 (6-7) (H901800-49)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1440	16.0	05/23/2019	ND	416	104	400	0.00		

Sample ID: SP - 14 (9-10) (H901800-50)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	672	16.0	05/23/2019	ND	416	104	400	0.00		

Sample ID: SP - 14 (14-15) (H901800-51)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1500	16.0	05/23/2019	ND	416	104	400	0.00		

Sample ID: SP - 14 (19-20) (H901800-52)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1540	16.0	05/23/2019	ND	416	104	400	0.00		

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 14 (24-25) (H901800-53)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1020	16.0	05/23/2019	ND	416	104	400	0.00		

Sample ID: SP - 14 (29-30) (H901800-54)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	05/23/2019	ND	416	104	400	0.00		

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/15/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 15 (0-1) (H901800-55)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.82	91.1	2.00	0.868	
Toluene*	<0.050	0.050	05/21/2019	ND	1.81	90.3	2.00	4.41	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.4	2.00	3.94	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.85	80.9	6.00	7.20	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 86.2 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9600	16.0	05/23/2019	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	545	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	203	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 124 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/15/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 15 (2-3) (H901800-56)

BTEX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/24/2019	ND	1.82	91.1	2.00	0.868	
Toluene*	<0.050	0.050	05/24/2019	ND	1.81	90.3	2.00	4.41	
Ethylbenzene*	<0.050	0.050	05/24/2019	ND	1.71	85.4	2.00	3.94	
Total Xylenes*	<0.150	0.150	05/24/2019	ND	4.85	80.9	6.00	7.20	
Total BTEX	<0.300	0.300	05/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2960	16.0	05/23/2019	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	31.5	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	21.2	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 98.8 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/15/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 15 (4-5) (H901800-57)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8400	16.0	05/23/2019	ND	416	104	400	0.00	

Sample ID: SP - 15 (6-7) (H901800-58)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10300	16.0	05/23/2019	ND	416	104	400	0.00	

Sample ID: SP - 15 (9-10) (H901800-59)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3440	16.0	05/23/2019	ND	416	104	400	0.00	

Sample ID: SP - 15 (14-15) (H901800-60)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	05/23/2019	ND	416	104	400	0.00	

Sample ID: SP - 15 (19-20) (H901800-61)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	05/23/2019	ND	416	104	400	0.00	

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/15/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 15 (24-25) (H901800-62)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	05/23/2019	ND	416	104	400	0.00		

Sample ID: SP - 15 (29-30) (H901800-63)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	05/23/2019	ND	416	104	400	0.00		

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 16 (0-1) (H901800-64)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.82	91.1	2.00	0.868	
Toluene*	<0.050	0.050	05/21/2019	ND	1.81	90.3	2.00	4.41	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.4	2.00	3.94	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.85	80.9	6.00	7.20	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 87.1 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	05/23/2019	ND	400	100	400	0.00	QM-07

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	547	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	224	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 124 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 16 (2-3) (H901800-65)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.82	91.1	2.00	0.868	
Toluene*	<0.050	0.050	05/21/2019	ND	1.81	90.3	2.00	4.41	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.4	2.00	3.94	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.85	80.9	6.00	7.20	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 74.7 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	05/23/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 16 (4-5) (H901800-66)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 16 (6-7) (H901800-67)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 16 (9-10) (H901800-68)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1250	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 16 (14-15) (H901800-69)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	848	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 16 (19-20) (H901800-70)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	05/23/2019	ND	400	100	400	0.00	

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 16 (24-25) (H901800-71)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 16 (29-30) (H901800-72)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 16 (34-35) (H901800-73)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	05/23/2019	ND	400	100	400	0.00	

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 17 (0-1) (H901800-74)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/21/2019	ND	1.82	91.1	2.00	0.868		
Toluene*	<0.050	0.050	05/21/2019	ND	1.81	90.3	2.00	4.41		
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.4	2.00	3.94		
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.85	80.9	6.00	7.20		
Total BTEX	<0.300	0.300	05/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 82.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8000	16.0	05/23/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 94.8 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/16/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 17 (2-3) (H901800-75)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.82	91.1	2.00	0.868	
Toluene*	<0.050	0.050	05/21/2019	ND	1.81	90.3	2.00	4.41	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.4	2.00	3.94	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.85	80.9	6.00	7.20	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 82.7 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1230	16.0	05/23/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 90.0 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 17 (4-5) (H901800-76)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1390	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 17 (6-7) (H901800-77)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	992	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 17 (9-10) (H901800-78)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 17 (14-15) (H901800-79)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	05/23/2019	ND	400	100	400	0.00	

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 18 (0-1) (H901800-80)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.82	91.1	2.00	0.868	
Toluene*	<0.050	0.050	05/21/2019	ND	1.81	90.3	2.00	4.41	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.4	2.00	3.94	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.85	80.9	6.00	7.20	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 82.0 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	05/23/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 89.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.2 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 18 (2-3) (H901800-81)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.82	91.1	2.00	0.868	
Toluene*	<0.050	0.050	05/21/2019	ND	1.81	90.3	2.00	4.41	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.4	2.00	3.94	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.85	80.9	6.00	7.20	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 73.5 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	05/23/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 88.9 % 37.6-147

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 18 (4-5) (H901800-82)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 18 (6-7) (H901800-83)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 18 (9-10) (H901800-84)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 18 (14-15) (H901800-85)

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	05/23/2019	ND	400	100	400	0.00	

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Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/16/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 19 (0-1) (H901800-86)

BTEX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/24/2019	ND	1.82	91.1	2.00	0.868	
Toluene*	<0.050	0.050	05/24/2019	ND	1.81	90.3	2.00	4.41	
Ethylbenzene*	<0.050	0.050	05/24/2019	ND	1.71	85.4	2.00	3.94	
Total Xylenes*	<0.150	0.150	05/24/2019	ND	4.85	80.9	6.00	7.20	
Total BTEX	<0.300	0.300	05/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.3 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5360	16.0	05/23/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 86.5 % 41-142

Surrogate: 1-Chlorooctadecane 87.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2019	Sampling Date:	05/16/2019
Reported:	05/28/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01743	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: SP - 19 (2-3) (H901800-87)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.82	91.1	2.00	0.868	
Toluene*	<0.050	0.050	05/21/2019	ND	1.81	90.3	2.00	4.41	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.71	85.4	2.00	3.94	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.85	80.9	6.00	7.20	
Total BTEX	<0.300	0.300	05/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 80.3 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2480	16.0	05/23/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	198	99.1	200	3.28	
DRO >C10-C28*	<10.0	10.0	05/21/2019	ND	192	95.9	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					

Surrogate: 1-Chlorooctane 87.0 % 41-142

Surrogate: 1-Chlorooctadecane 89.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2019
 Reported: 05/28/2019
 Project Name: DORSTATE SWD
 Project Number: 212C-MD-01743
 Project Location: PWS - EDDY CO NM

Sampling Date: 05/16/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP - 19 (4-5) (H901800-88)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	16.0	05/23/2019	ND	400	100	400	0.00	

Sample ID: SP - 19 (6-7) (H901800-89)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	480	16.0	05/23/2019	ND	400	100	400	0.00		

Sample ID: SP - 19 (9-10) (H901800-90)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	05/23/2019	ND	400	100	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Caley D. Keene".

Caley D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Tetra Tech</u>				BILL TO				ANALYSIS REQUEST					
Project Manager: <u>Chlor Conzales</u>				P.O. #: <u>Tetra Tech</u>									
Address: <u>901 W. Wall St. Ste 100</u>				Company: <u>Tetra Tech</u>									
City: <u>Murfreesboro</u>				Attn: <u>Chlor Conzales</u>									
State: <u>TX</u>				Address: <u> </u>									
Zip: <u>75101</u>				City: <u> </u>									
Phone #: <u> </u>				State: <u> </u>									
Fax #: <u> </u>				Zip: <u> </u>									
Project #: <u>212C-MD-01743</u>				Project Owner: <u>PLDS</u>									
Project Name: <u>Darstake SWD</u>				Phone #: <u> </u>									
Project Location: <u>Eddy Co. TX</u>				Fax #: <u> </u>									
Sampler Name: <u>Chlor Conzales</u>													
FOR LAB USE ONLY													
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING	
								GROUNDWATER					
								WASTEWATER					
								SOIL					
								OIL					
								SLUDGE					
								OTHER:					
								ACID/BASE:					
								ICE / COOL					
								OTHER:					
								DATE					
								TIME					

PLEASE NOTE: Labby and Samples Containers labels and client's exclusive remedy for any claim arising under this contract or TSCA shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidents or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.	
Relinquished By: <u>[Signature]</u>	Received By: <u>[Signature]</u>
Date: <u>5/17</u>	Date: <u>5/17</u>
Time: <u>4:00</u>	Time: <u> </u>
Relinquished By: <u>[Signature]</u>	Received By: <u>[Signature]</u>
Date: <u> </u>	Date: <u> </u>
Time: <u> </u>	Time: <u> </u>

Delivered By: (Circle One)		Sample Condition		CHECKED BY:	
Sampler - UPS	Bus - Other:	<input checked="" type="checkbox"/> Cool	<input checked="" type="checkbox"/> Intact	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<u>0.66 #97</u>		<u>70</u>		<u>[Signature]</u>	

REMARKS:	
Chlorides BTEX TPH	



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:		P.O. #:		BILL TO		ANALYSIS REQUEST											
Project Manager:		Company:															
Address:		Attn:															
City:		Address:															
Phone #:		City:															
Project #:		State:															
Project Name:		Zip:															
Project Location:		Phone #:															
Sample Name:		Fax #:															
FOR LAB USE ONLY		PRESERV		SAMPLING													
Lab I.D.		Sample I.D.															
H901800		(G)RAB OR (C)OMP.		# CONTAINERS													
11 SP-6 (39-40)		GROUNDWATER		WASTEWATER													
12 SP-7 (44-45)		SOIL		OIL													
13 SP-7 (4-1)		SLUDGE		OTHER:													
14 (7-8)		ACID/BASE:		ICE / COOL													
15 (4-5)		OTHER:		DATE		TIME											
16 (6-7)		X		5/15		09:30		Chlorides									
17 (9-10)		X		X		9:30		BTEX									
18 (14-15)		X		X		10:00		TPH									
19 (19-20)		X		X													
20 (24-25)		X		X													

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Relinquished By: *[Signature]* Date: 5/17 Received By: *[Signature]* Date: 5/17 Time: 14:00

Delivered By: (Circle One) *UPS* *Bus* *Other* *D.O.C. #477*

Sample Condition: Cool ☒ Intact ☒ Yes ☐ No ☐ Yes ☐ No

CHECKED BY: *[Signature]* (Initials) *70.*

REMARKS: Phone Result: ☐ Yes ☐ No Add'l Phone #: Fax Result: ☐ Yes ☐ No Add'l Fax #:

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Released to Imaging: 7/29/2021 3:19:33 PM

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

Released to Imaging: 7/29/2021 3:19:33 PM

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[illegible]



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name:										
Project Manager:										
Address:										
City:	State:	Zip:								
Phone #:	Fax #:									
Project #:	Project Owner:									
Project Name:										
Project Location:										
Sampler Name:										

P.O. #:										
Company:										
Attn:										
Address:										
City:	State:	Zip:								
Phone #:										
Fax #:										

BILL TO										
ANALYSIS REQUEST										

[illegible][illegible]

Relinquished By:

Date: 5/17 Received By:

Requiring signed By:

Time: 5/17
Date: 14:00
Received By: Januara Shadya

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

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other:

Sample Condition
Cool ☒ Yes ☐ No
Intact ☒ Yes ☐ No

CHECKED BY (Initials)
D.O. #97



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:		P.O. #:		BILL TO										ANALYSIS REQUEST											
Project Manager:		Company:																							
Address:		Attn:																							
City:		Address:																							
Phone #:		City:																							
Fax #:		State:																							
Project #:		Zip:																							
Project Name:		Phone #:																							
Project Location:		Fax #:																							
Sampler Name:																									
FOR LAB USE ONLY																									
Lab I.D.		(G)RAB OR (C)OMP		# CONTAINERS		GROUNDWATER		WASTEWATER		MATRIX		PRESERV.		SAMPLING											
H901800																									
71 SP-16 (24-25)				X		X		X		X		X		X		Chlorides									
72 (24-30)				X		X		X		X		X		X		BTEX									
73 (34-35)				X		X		X		X		X		X		TPH									
74 SP-17 (0-1)				X		X		X		X		X		X											
75 (2-3)				X		X		X		X		X		X											
76 (4-5)				X		X		X		X		X		X											
77 (6-7)				X		X		X		X		X		X											
78 (9-10)				X		X		X		X		X		X											
79 (14-15)				X		X		X		X		X		X											
80 SP-18 (0-1)				X		X		X		X		X		X											
PLEASE NOTE: Laboratory and Client's vehicles cannot be used for transport of this material to the nearest port by the client for the analysis. All those vehicles must be inspected and approved by the client before use. All vehicles must be inspected and approved by the client before use. All vehicles must be inspected and approved by the client before use.																									
Relinquished By:		Date:		Time:		Received By:		Date:		Time:		Phone Result:		Fax Result:		REMARKS:									
Delivered By: (Circle One)		Sample Condition		Checked By:		Initials		Phone Result:		Fax Result:		Add'l Phone #:		Add'l Fax #:											
Sampler - UPS - Bus - Other:		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>											

101 East Marland, Hobbs, NM 88240
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Released to Imaging: 7/29/2021 3:19:33 PM

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

May 31, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: DORSTATE SWD

Enclosed are the results of analyses for samples received by the laboratory on 05/17/19 14:00.

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

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP - 20 (0-1)	H901801-01	Soil	16-May-19 13:00	17-May-19 14:00
SP - 20 (2-3)	H901801-02	Soil	16-May-19 13:00	17-May-19 14:00
SP - 20 (4-5)	H901801-03	Soil	16-May-19 13:00	17-May-19 14:00
SP - 20 (6-7)	H901801-04	Soil	16-May-19 13:00	17-May-19 14:00
SP - 20 (9-10)	H901801-05	Soil	16-May-19 13:00	17-May-19 14:00
SP - 21 (0-1)	H901801-06	Soil	16-May-19 13:30	17-May-19 14:00
SP - 21 (2-3)	H901801-07	Soil	16-May-19 13:30	17-May-19 14:00
SP - 21 (4-5)	H901801-08	Soil	16-May-19 13:30	17-May-19 14:00
SP - 21 (6-7)	H901801-09	Soil	16-May-19 13:30	17-May-19 14:00
SP - 21 (9-10)	H901801-10	Soil	16-May-19 13:30	17-May-19 14:00
SP - 21 (14-15)	H901801-11	Soil	16-May-19 13:30	17-May-19 14:00
SP - 21 (19-20)	H901801-12	Soil	16-May-19 13:30	17-May-19 14:00
SP - 21 (24-25)	H901801-13	Soil	16-May-19 13:30	17-May-19 14:00
BG - 1 (0-1)	H901801-14	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (2-3)	H901801-15	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (4-5)	H901801-16	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (6-7)	H901801-17	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (9-10)	H901801-18	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (14-15)	H901801-19	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (19-20)	H901801-20	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (24-25)	H901801-21	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (29-30)	H901801-22	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (34-35)	H901801-23	Soil	16-May-19 14:00	17-May-19 14:00
BG - 1 (39-40)	H901801-24	Soil	16-May-19 14:00	17-May-19 14:00
SP - 13 (0-1)	H901801-25	Soil	17-May-19 09:30	17-May-19 14:00
SP - 13 (2-3)	H901801-26	Soil	17-May-19 09:30	17-May-19 14:00
SP - 13 (4-5)	H901801-27	Soil	17-May-19 09:30	17-May-19 14:00

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (6-7)	H901801-28	Soil	17-May-19 09:30	17-May-19 14:00
SP - 13 (9-10)	H901801-29	Soil	17-May-19 09:30	17-May-19 14:00
SP - 13 (14-15)	H901801-30	Soil	17-May-19 09:30	17-May-19 14:00
SP - 13 (19-20)	H901801-31	Soil	17-May-19 09:30	17-May-19 14:00
SP - 13 (24-25)	H901801-32	Soil	17-May-19 09:30	17-May-19 14:00
SP - 13 (29-30)	H901801-33	Soil	17-May-19 09:30	17-May-19 14:00
SP - 13 (34-35)	H901801-34	Soil	17-May-19 09:30	17-May-19 14:00
SP - 13 (39-40)	H901801-35	Soil	17-May-19 09:30	17-May-19 14:00
SP - 10 (0-1)	H901801-36	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (2-3)	H901801-37	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (4-5)	H901801-38	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (6-7)	H901801-39	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (9-10)	H901801-40	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (14-15)	H901801-41	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (19-20)	H901801-42	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (24-25)	H901801-43	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (29-30)	H901801-44	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (34-35)	H901801-45	Soil	17-May-19 10:00	17-May-19 14:00
SP - 10 (39-40)	H901801-46	Soil	17-May-19 10:00	17-May-19 14:00
SP - 11 (0-1)	H901801-47	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (2-3)	H901801-48	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (4-5)	H901801-49	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (6-7)	H901801-50	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (9-10)	H901801-51	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (14-15)	H901801-52	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (19-20)	H901801-53	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (24-25)	H901801-54	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (29-30)	H901801-55	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (34-35)	H901801-56	Soil	17-May-19 10:30	17-May-19 14:00
SP - 11 (39-40)	H901801-57	Soil	17-May-19 10:30	17-May-19 14:00

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (44-45)	H901801-58	Soil	17-May-19 10:30	17-May-19 14:00
SP - 12 (0-1)	H901801-59	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (2-3)	H901801-60	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (4-5)	H901801-61	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (6-7)	H901801-62	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (9-10)	H901801-63	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (14-15)	H901801-64	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (19-20)	H901801-65	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (24-25)	H901801-66	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (29-30)	H901801-67	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (34-35)	H901801-68	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (39-40)	H901801-69	Soil	17-May-19 11:30	17-May-19 14:00
SP - 12 (44-45)	H901801-70	Soil	17-May-19 11:30	17-May-19 14:00

TPH added as per Clair 05/28/19. This is the revised report and will replace the one sent on 05/28/19.

05/30/19 Clair added BTEX and TPH to samples 65 thru 70. This is the 2nd revision of the report and will replace the one sent on 05/30/19.

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 20 (0-1)**H901801-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	7920		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9052102	MS	21-May-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9052102	MS	21-May-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9052102	MS	21-May-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9052102	MS	21-May-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9052102	MS	21-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			84.2 %		73.3-129	9052102	MS	21-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052009	MS	21-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9052009	MS	21-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052009	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane			90.1 %		41-142	9052009	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			93.6 %		37.6-147	9052009	MS	21-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 20 (2-3)
H901801-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1630	16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052102	ms	24-May-19	8021B
Toluene*	<0.050	0.050	mg/kg	50	9052102	ms	24-May-19	8021B
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052102	ms	24-May-19	8021B
Total Xylenes*	<0.150	0.150	mg/kg	50	9052102	ms	24-May-19	8021B
Total BTEX	<0.300	0.300	mg/kg	50	9052102	ms	24-May-19	8021B

Surrogate: 4-Bromofluorobenzene (PID)	94.9 %	73.3-129	9052102	ms	24-May-19	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9052009	MS	21-May-19	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	9052009	MS	21-May-19	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9052009	MS	21-May-19	8015B

Surrogate: 1-Chlorooctane	91.8 %	41-142	9052009	MS	21-May-19	8015B
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Surrogate: 1-Chlorooctadecane	93.3 %	37.6-147	9052009	MS	21-May-19	8015B
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 20 (4-5)**H901801-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2480		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 20 (6-7)**H901801-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	432		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 20 (9-10)
H901801-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Chloride	144		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 21 (0-1)**H901801-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Chloride	2760		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9052102	MS	21-May-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9052102	MS	21-May-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9052102	MS	21-May-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9052102	MS	21-May-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9052102	MS	21-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			90.9 %	73.3-129		9052102	MS	21-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052009	MS	21-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9052009	MS	21-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052009	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane			88.0 %	41-142		9052009	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			89.5 %	37.6-147		9052009	MS	21-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 21 (2-3)
H901801-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2680	16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052102	MS	21-May-19	8021B
Toluene*	<0.050	0.050	mg/kg	50	9052102	MS	21-May-19	8021B
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052102	MS	21-May-19	8021B
Total Xylenes*	<0.150	0.150	mg/kg	50	9052102	MS	21-May-19	8021B
Total BTEX	<0.300	0.300	mg/kg	50	9052102	MS	21-May-19	8021B

Surrogate: 4-Bromofluorobenzene (PID)	91.0 %	73.3-129	9052102	MS	21-May-19	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9052009	MS	21-May-19	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	9052009	MS	21-May-19	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9052009	MS	21-May-19	8015B

Surrogate: 1-Chlorooctane	87.5 %	41-142	9052009	MS	21-May-19	8015B
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Surrogate: 1-Chlorooctadecane	90.1 %	37.6-147	9052009	MS	21-May-19	8015B
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 21 (4-5)**H901801-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2240		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 21 (6-7)**H901801-09 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1920		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 21 (9-10)**H901801-10 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1340		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 21 (14-15)**H901801-11 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	496		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 21 (19-20)**H901801-12 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1100		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 21 (24-25)**H901801-13 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1390		16.0	mg/kg	4	9052313	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (0-1)**H901801-14 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Chloride	80.0		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9052102	MS	22-May-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9052102	MS	22-May-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9052102	MS	22-May-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9052102	MS	22-May-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9052102	MS	22-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			103 %		73.3-129	9052102	MS	22-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9051719	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane			81.3 %		41-142	9051719	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			87.7 %		37.6-147	9051719	MS	21-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (2-3)
H901801-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	208	16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052102	MS	22-May-19	8021B
Toluene*	<0.050	0.050	mg/kg	50	9052102	MS	22-May-19	8021B
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052102	MS	22-May-19	8021B
Total Xylenes*	<0.150	0.150	mg/kg	50	9052102	MS	22-May-19	8021B
Total BTEX	<0.300	0.300	mg/kg	50	9052102	MS	22-May-19	8021B

Surrogate: 4-Bromofluorobenzene (PID)	78.3 %	73.3-129	9052102	MS	22-May-19	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B

Surrogate: 1-Chlorooctane	81.7 %	41-142	9051719	MS	21-May-19	8015B
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Surrogate: 1-Chlorooctadecane	89.6 %	37.6-147	9051719	MS	21-May-19	8015B
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (4-5)
H901801-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	672		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (6-7)**H901801-17 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	352		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (9-10)**H901801-18 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	256		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (14-15)
H901801-19 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	176		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

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901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (19-20)**H901801-20 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	160		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

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901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (24-25)**H901801-21 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	144		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (29-30)
H901801-22 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	80.0		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (34-35)
H901801-23 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Chloride	128		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

BG - 1 (39-40)
H901801-24 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	112		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (0-1)
H901801-25 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3200		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052102	MS	22-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9052102	MS	22-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052102	MS	22-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9052102	MS	22-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9052102	MS	22-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		82.6 %		73.3-129	9052102	MS	22-May-19	8021B	
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Petroleum Hydrocarbons by GC FID**S-04**

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051719	MS	22-May-19	8015B	
DRO >C10-C28*	2070	10.0	mg/kg	1	9051719	MS	22-May-19	8015B	
EXT DRO >C28-C36	1050	10.0	mg/kg	1	9051719	MS	22-May-19	8015B	

Surrogate: 1-Chlorooctane		87.7 %		41-142	9051719	MS	22-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		159 %		37.6-147	9051719	MS	22-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (2-3)
H901801-26 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3440		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9052103	ms	21-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9052103	ms	21-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		89.7 %		73.3-129	9052103	ms	21-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
DRO >C10-C28*	129	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
EXT DRO >C28-C36	35.5	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane		86.5 %		41-142	9051719	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		104 %		37.6-147	9051719	MS	21-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (4-5)
H901801-27 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1380		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
Surrogate: 1-Chlorooctane			81.1 %		41-142	9052813	MS	29-May-19	8015B	
Surrogate: 1-Chlorooctadecane			79.5 %		37.6-147	9052813	MS	29-May-19	8015B	

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (6-7)**H901801-28 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Chloride	3440		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	

Surrogate: 1-Chlorooctane			78.0 %		41-142	9052813	MS	29-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			75.6 %		37.6-147	9052813	MS	29-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (9-10)
H901801-29 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3840		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
Surrogate: 1-Chlorooctane			90.6 %	41-142		9052813	MS	29-May-19	8015B	
Surrogate: 1-Chlorooctadecane			88.5 %	37.6-147		9052813	MS	29-May-19	8015B	

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (14-15)**H901801-30 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	6560		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9052813	MS	29-May-19	8015B	

Surrogate: 1-Chlorooctane			93.6 %	41-142		9052813	MS	29-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			90.6 %	37.6-147		9052813	MS	29-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (19-20)**H901801-31 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	7200		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (24-25)**H901801-32 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4800		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (29-30)
H901801-33 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1420		16.0	mg/kg	4	9052408	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (34-35)**H901801-34 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4320		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	QM-07
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 13 (39-40)**H901801-35 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4480		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (0-1)
H901801-36 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4000		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9052103	ms	21-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9052103	ms	21-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		93.1 %		73.3-129	9052103	ms	21-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
DRO >C10-C28*	1320	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
EXT DRO >C28-C36	1790	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane		88.6 %		41-142	9051719	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		117 %		37.6-147	9051719	MS	21-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (2-3)
H901801-37 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3120		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9052103	ms	21-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9052103	ms	21-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		92.3 %		73.3-129	9052103	ms	21-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
DRO >C10-C28*	26.2	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
EXT DRO >C28-C36	19.3	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane		84.5 %		41-142	9051719	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		94.9 %		37.6-147	9051719	MS	21-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (4-5)**H901801-38 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4160		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (6-7)**H901801-39 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1760		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (9-10)
H901801-40 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Chloride	2800		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (14-15)**H901801-41 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3600		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (19-20)**H901801-42 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2920		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (24-25)**H901801-43 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3080		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (29-30)**H901801-44 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4240		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (34-35)**H901801-45 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4640		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 10 (39-40)**H901801-46 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4880		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (0-1)
H901801-47 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1760		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9052103	ms	21-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9052103	ms	21-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		91.8 %		73.3-129	9052103	ms	21-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
DRO >C10-C28*	120	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
EXT DRO >C28-C36	44.9	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane		85.6 %		41-142	9051719	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		102 %		37.6-147	9051719	MS	21-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (2-3)
H901801-48 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	400		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9052103	ms	21-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9052103	ms	21-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		92.5 %		73.3-129	9052103	ms	21-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane		79.3 %		41-142	9051719	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		87.7 %		37.6-147	9051719	MS	21-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (4-5)
H901801-49 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1070		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (6-7)**H901801-50 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1700		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (9-10)**H901801-51 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3600		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (14-15)
H901801-52 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	6000		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (19-20)**H901801-53 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	7360		16.0	mg/kg	4	9052409	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (24-25)
H901801-54 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5760		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	QM-07
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (29-30)**H901801-55 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	6800		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (34-35)**H901801-56 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5730		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (39-40)**H901801-57 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5730		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 11 (44-45)**H901801-58 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	6960		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (0-1)
H901801-59 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	4960		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9052103	ms	21-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9052103	ms	21-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		94.5 %		73.3-129	9052103	ms	21-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
DRO >C10-C28*	417	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	
EXT DRO >C28-C36	124	10.0	mg/kg	1	9051719	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane		80.6 %		41-142	9051719	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		100 %		37.6-147	9051719	MS	21-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (2-3)
H901801-60 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3320		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021**S-04**

Benzene*	<0.050		0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Toluene*	0.229		0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Ethylbenzene*	1.29		0.050	mg/kg	50	9052103	ms	21-May-19	8021B	
Total Xylenes*	0.326		0.150	mg/kg	50	9052103	ms	21-May-19	8021B	
Total BTEX	1.85		0.300	mg/kg	50	9052103	ms	21-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			183 %		73.3-129	9052103	ms	21-May-19	8021B	
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Petroleum Hydrocarbons by GC FID**S-06**

GRO C6-C10*	240		100	mg/kg	10	9051719	MS	21-May-19	8015B	
DRO >C10-C28*	6620		100	mg/kg	10	9051719	MS	21-May-19	8015B	
EXT DRO >C28-C36	1960		100	mg/kg	10	9051719	MS	21-May-19	8015B	

Surrogate: 1-Chlorooctane			128 %		41-142	9051719	MS	21-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			239 %		37.6-147	9051719	MS	21-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (4-5)
H901801-61 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	8800		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID**S-06**

GRO C6-C10*	2360		100	mg/kg	10	9052902	MS	29-May-19	8015B	QM-07
DRO >C10-C28*	18500		100	mg/kg	10	9052902	MS	29-May-19	8015B	QM-07
EXT DRO >C28-C36	2730		100	mg/kg	10	9052902	MS	29-May-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			605 %	41-142		9052902	MS	29-May-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			689 %	37.6-147		9052902	MS	29-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (6-7)**H901801-62 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	2520		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID**S-04**

GRO C6-C10*	112		10.0	mg/kg	1	9052902	MS	29-May-19	8015B	
DRO >C10-C28*	2400		10.0	mg/kg	1	9052902	MS	29-May-19	8015B	
EXT DRO >C28-C36	479		10.0	mg/kg	1	9052902	MS	29-May-19	8015B	

Surrogate: 1-Chlorooctane			144 %	41-142		9052902	MS	29-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			168 %	37.6-147		9052902	MS	29-May-19	8015B	
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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (9-10)
H901801-63 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	3840		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID**S-06**

GRO C6-C10*	147		50.0	mg/kg	5	9052902	MS	29-May-19	8015B	
DRO >C10-C28*	2940		50.0	mg/kg	5	9052902	MS	29-May-19	8015B	
EXT DRO >C28-C36	251		50.0	mg/kg	5	9052902	MS	29-May-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>			174 %	41-142		9052902	MS	29-May-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			194 %	37.6-147		9052902	MS	29-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (14-15)
H901801-64 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	5520		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID**S-04**

GRO C6-C10*	446		10.0	mg/kg	1	9052902	MS	29-May-19	8015B	
DRO >C10-C28*	5640		10.0	mg/kg	1	9052902	MS	29-May-19	8015B	
EXT DRO >C28-C36	1170		10.0	mg/kg	1	9052902	MS	29-May-19	8015B	

Surrogate: 1-Chlorooctane			219 %		41-142	9052902	MS	29-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			281 %		37.6-147	9052902	MS	29-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (19-20)**H901801-65 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	6320		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Total Xylenes*	0.212		0.150	mg/kg	50	9053003	ms	30-May-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9053003	ms	30-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			111 %	73.3-129		9053003	ms	30-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9053005	MS	30-May-19	8015B	
DRO >C10-C28*	1250		10.0	mg/kg	1	9053005	MS	30-May-19	8015B	QM-07
EXT DRO >C28-C36	212		10.0	mg/kg	1	9053005	MS	30-May-19	8015B	

Surrogate: 1-Chlorooctane			106 %	41-142		9053005	MS	30-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			135 %	37.6-147		9053005	MS	30-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (24-25)**H901801-66 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	7520		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9053003	ms	30-May-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9053003	ms	30-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			105 %	73.3-129		9053003	ms	30-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9053005	MS	30-May-19	8015B	
DRO >C10-C28*	262		10.0	mg/kg	1	9053005	MS	30-May-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9053005	MS	30-May-19	8015B	

Surrogate: 1-Chlorooctane			94.4 %	41-142		9053005	MS	30-May-19	8015B	
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Surrogate: 1-Chlorooctadecane			116 %	37.6-147		9053005	MS	30-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (29-30)**H901801-67 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	7200		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9053003	ms	30-May-19	8021B
Toluene*	<0.050		0.050	mg/kg	50	9053003	ms	30-May-19	8021B
Ethylbenzene*	<0.050		0.050	mg/kg	50	9053003	ms	30-May-19	8021B
Total Xylenes*	<0.150		0.150	mg/kg	50	9053003	ms	30-May-19	8021B
Total BTEX	<0.300		0.300	mg/kg	50	9053003	ms	30-May-19	8021B

Surrogate: 4-Bromofluorobenzene (PID)			106 %		73.3-129	9053003	ms	30-May-19	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9053005	MS	30-May-19	8015B
DRO >C10-C28*	180		10.0	mg/kg	1	9053005	MS	30-May-19	8015B
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9053005	MS	30-May-19	8015B

Surrogate: 1-Chlorooctane			97.0 %		41-142	9053005	MS	30-May-19	8015B
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Surrogate: 1-Chlorooctadecane			116 %		37.6-147	9053005	MS	30-May-19	8015B
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (34-35)
H901801-68 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	6000		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9053003	ms	30-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9053003	ms	30-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		107 %		73.3-129	9053003	ms	30-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9053005	MS	30-May-19	8015B	
DRO >C10-C28*	293	10.0	mg/kg	1	9053005	MS	30-May-19	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9053005	MS	30-May-19	8015B	

Surrogate: 1-Chlorooctane		100 %		41-142	9053005	MS	30-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		113 %		37.6-147	9053005	MS	30-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (39-40)**H901801-69 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	6080	16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9053003	ms	30-May-19	8021B
Toluene*	<0.050	0.050	mg/kg	50	9053003	ms	30-May-19	8021B
Ethylbenzene*	<0.050	0.050	mg/kg	50	9053003	ms	30-May-19	8021B
Total Xylenes*	<0.150	0.150	mg/kg	50	9053003	ms	30-May-19	8021B
Total BTEX	<0.300	0.300	mg/kg	50	9053003	ms	30-May-19	8021B

Surrogate: 4-Bromofluorobenzene (PID)	106 %	73.3-129	9053003	ms	30-May-19	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9053005	MS	30-May-19	8015B
DRO >C10-C28*	54.0	10.0	mg/kg	1	9053005	MS	30-May-19	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9053005	MS	30-May-19	8015B

Surrogate: 1-Chlorooctane	97.1 %	41-142	9053005	MS	30-May-19	8015B
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Surrogate: 1-Chlorooctadecane	101 %	37.6-147	9053005	MS	30-May-19	8015B
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

SP - 12 (44-45)
H901801-70 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	6480		16.0	mg/kg	4	9052206	AC	24-May-19	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9053003	ms	30-May-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9053003	ms	30-May-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9053003	ms	30-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		105 %		73.3-129	9053003	ms	30-May-19	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	9053005	MS	30-May-19	8015B	
DRO >C10-C28*	81.1	10.0	mg/kg	1	9053005	MS	30-May-19	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9053005	MS	30-May-19	8015B	

Surrogate: 1-Chlorooctane		95.2 %		41-142	9053005	MS	30-May-19	8015B	
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Surrogate: 1-Chlorooctadecane		99.9 %		37.6-147	9053005	MS	30-May-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9052206 - 1:4 DI Water										
Blank (9052206-BLK1)				Prepared & Analyzed: 22-May-19						
Chloride	ND	16.0	mg/kg							
LCS (9052206-BS1)				Prepared & Analyzed: 22-May-19						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (9052206-BSD1)				Prepared & Analyzed: 22-May-19						
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	
Batch 9052313 - 1:4 DI Water										
Blank (9052313-BLK1)				Prepared & Analyzed: 23-May-19						
Chloride	ND	16.0	mg/kg							
LCS (9052313-BS1)				Prepared & Analyzed: 23-May-19						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (9052313-BSD1)				Prepared & Analyzed: 23-May-19						
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	
Batch 9052408 - 1:4 DI Water										
Blank (9052408-BLK1)				Prepared & Analyzed: 24-May-19						
Chloride	ND	16.0	mg/kg							
LCS (9052408-BS1)				Prepared & Analyzed: 24-May-19						
Chloride	400	16.0	mg/kg	400		100	80-120			

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9052408 - 1:4 DI Water										
LCS Dup (9052408-BSD1)				Prepared & Analyzed: 24-May-19						
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	
Batch 9052409 - 1:4 DI Water										
Blank (9052409-BLK1)				Prepared & Analyzed: 24-May-19						
Chloride	ND	16.0	mg/kg							
LCS (9052409-BS1)				Prepared & Analyzed: 24-May-19						
Chloride	384	16.0	mg/kg	400		96.0	80-120			
LCS Dup (9052409-BSD1)				Prepared & Analyzed: 24-May-19						
Chloride	400	16.0	mg/kg	400		100	80-120	4.08	20	

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9052102 - Volatiles**Blank (9052102-BLK1)**

Prepared & Analyzed: 21-May-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							

Surrogate: 4-Bromofluorobenzene (PID) 0.115 mg/kg 0.100 115 73.3-129

LCS (9052102-BS1)

Prepared & Analyzed: 21-May-19

Benzene	1.82	0.050	mg/kg	2.00		91.1	72.2-131			
Toluene	1.81	0.050	mg/kg	2.00		90.3	71.7-126			
Ethylbenzene	1.71	0.050	mg/kg	2.00		85.4	68.9-126			
Total Xylenes	4.85	0.150	mg/kg	6.00		80.9	71.4-125			

Surrogate: 4-Bromofluorobenzene (PID) 0.0777 mg/kg 0.100 77.7 73.3-129

LCS Dup (9052102-BSD1)

Prepared & Analyzed: 21-May-19

Benzene	1.81	0.050	mg/kg	2.00		90.3	72.2-131	0.868	6.91	
Toluene	1.89	0.050	mg/kg	2.00		94.4	71.7-126	4.41	7.12	
Ethylbenzene	1.78	0.050	mg/kg	2.00		88.8	68.9-126	3.94	7.88	
Total Xylenes	5.21	0.150	mg/kg	6.00		86.9	71.4-125	7.20	7.46	

Surrogate: 4-Bromofluorobenzene (PID) 0.0905 mg/kg 0.100 90.5 73.3-129

Batch 9052103 - Volatiles**Blank (9052103-BLK1)**

Prepared & Analyzed: 21-May-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							

Surrogate: 4-Bromofluorobenzene (PID) 0.0923 mg/kg 0.100 92.3 73.3-129

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9052103 - Volatiles**LCS (9052103-BS1)**

Prepared & Analyzed: 21-May-19

Benzene	1.59	0.050	mg/kg	2.00		79.3	72.2-131			
Toluene	1.72	0.050	mg/kg	2.00		85.8	71.7-126			
Ethylbenzene	1.64	0.050	mg/kg	2.00		82.1	68.9-126			
Total Xylenes	4.95	0.150	mg/kg	6.00		82.4	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0890		mg/kg	0.100		89.0	73.3-129			

LCS Dup (9052103-BSD1)

Prepared & Analyzed: 21-May-19

Benzene	1.71	0.050	mg/kg	2.00		85.7	72.2-131	7.78	6.91	QR-02
Toluene	1.84	0.050	mg/kg	2.00		92.2	71.7-126	7.14	7.12	QR-02
Ethylbenzene	1.76	0.050	mg/kg	2.00		88.0	68.9-126	6.86	7.88	
Total Xylenes	5.30	0.150	mg/kg	6.00		88.3	71.4-125	6.83	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	0.0913		mg/kg	0.100		91.3	73.3-129			

Batch 9053003 - Volatiles**Blank (9053003-BLK1)**

Prepared & Analyzed: 30-May-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.106		mg/kg	0.100		106	73.3-129			

LCS (9053003-BS1)

Prepared & Analyzed: 30-May-19

Benzene	1.87	0.050	mg/kg	2.00		93.7	72.2-131			
Toluene	1.98	0.050	mg/kg	2.00		99.0	71.7-126			
Ethylbenzene	1.90	0.050	mg/kg	2.00		94.9	68.9-126			
Total Xylenes	5.79	0.150	mg/kg	6.00		96.5	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.107		mg/kg	0.100		107	73.3-129			

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9053003 - Volatiles										
LCS Dup (9053003-BSD1)				Prepared & Analyzed: 30-May-19						
Benzene	1.79	0.050	mg/kg	2.00		89.6	72.2-131	4.54	6.91	
Toluene	1.89	0.050	mg/kg	2.00		94.5	71.7-126	4.64	7.12	
Ethylbenzene	1.80	0.050	mg/kg	2.00		89.9	68.9-126	5.51	7.88	
Total Xylenes	5.52	0.150	mg/kg	6.00		91.9	71.4-125	4.85	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	0.107		mg/kg	0.100		107	73.3-129			

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9051719 - General Prep - Organics**Blank (9051719-BLK1)**

Prepared: 17-May-19 Analyzed: 21-May-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	45.3		mg/kg	50.0		90.6	41-142			
Surrogate: 1-Chlorooctadecane	50.2		mg/kg	50.0		100	37.6-147			

LCS (9051719-BS1)

Prepared: 17-May-19 Analyzed: 21-May-19

GRO C6-C10	188	10.0	mg/kg	200		94.0	76.5-133			
DRO >C10-C28	224	10.0	mg/kg	200		112	72.9-138			
Total TPH C6-C28	412	10.0	mg/kg	400		103	78-132			
Surrogate: 1-Chlorooctane	49.3		mg/kg	50.0		98.7	41-142			
Surrogate: 1-Chlorooctadecane	53.2		mg/kg	50.0		106	37.6-147			

LCS Dup (9051719-BS1)

Prepared: 17-May-19 Analyzed: 21-May-19

GRO C6-C10	201	10.0	mg/kg	200		100	76.5-133	6.52	20.6	
DRO >C10-C28	244	10.0	mg/kg	200		122	72.9-138	8.64	20.6	
Total TPH C6-C28	445	10.0	mg/kg	400		111	78-132	7.68	18	
Surrogate: 1-Chlorooctane	50.2		mg/kg	50.0		100	41-142			
Surrogate: 1-Chlorooctadecane	54.6		mg/kg	50.0		109	37.6-147			

Batch 9052009 - General Prep - Organics**Blank (9052009-BLK1)**

Prepared: 20-May-19 Analyzed: 21-May-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	49.0		mg/kg	50.0		98.1	41-142			
Surrogate: 1-Chlorooctadecane	49.9		mg/kg	50.0		99.8	37.6-147			

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 9052009 - General Prep - Organics**LCS (9052009-BS1)**

Prepared: 20-May-19 Analyzed: 21-May-19

GRO C6-C10	198	10.0	mg/kg	200		99.1	76.5-133		
DRO >C10-C28	192	10.0	mg/kg	200		95.9	72.9-138		
Total TPH C6-C28	390	10.0	mg/kg	400		97.5	78-132		
Surrogate: 1-Chlorooctane	53.3		mg/kg	50.0		107	41-142		
Surrogate: 1-Chlorooctadecane	52.0		mg/kg	50.0		104	37.6-147		

LCS Dup (9052009-BSD1)

Prepared: 20-May-19 Analyzed: 21-May-19

GRO C6-C10	205	10.0	mg/kg	200		102	76.5-133	3.28	20.6
DRO >C10-C28	201	10.0	mg/kg	200		101	72.9-138	4.80	20.6
Total TPH C6-C28	406	10.0	mg/kg	400		102	78-132	4.03	18
Surrogate: 1-Chlorooctane	54.3		mg/kg	50.0		109	41-142		
Surrogate: 1-Chlorooctadecane	52.9		mg/kg	50.0		106	37.6-147		

Batch 9052813 - General Prep - Organics**Blank (9052813-BLK1)**

Prepared: 28-May-19 Analyzed: 29-May-19

GRO C6-C10	ND	10.0	mg/kg						
DRO >C10-C28	ND	10.0	mg/kg						
EXT DRO >C28-C36	ND	10.0	mg/kg						
Surrogate: 1-Chlorooctane	48.7		mg/kg	50.0		97.5	41-142		
Surrogate: 1-Chlorooctadecane	48.6		mg/kg	50.0		97.1	37.6-147		

LCS (9052813-BS1)

Prepared: 28-May-19 Analyzed: 29-May-19

GRO C6-C10	180	10.0	mg/kg	200		90.2	76.5-133		
DRO >C10-C28	182	10.0	mg/kg	200		91.0	72.9-138		
Total TPH C6-C28	362	10.0	mg/kg	400		90.6	78-132		
Surrogate: 1-Chlorooctane	52.2		mg/kg	50.0		104	41-142		
Surrogate: 1-Chlorooctadecane	51.2		mg/kg	50.0		102	37.6-147		

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9052813 - General Prep - Organics**LCS Dup (9052813-BSD1)**

Prepared: 28-May-19 Analyzed: 29-May-19

GRO C6-C10	202	10.0	mg/kg	200		101	76.5-133	11.1	20.6	
DRO >C10-C28	205	10.0	mg/kg	200		102	72.9-138	11.7	20.6	
Total TPH C6-C28	406	10.0	mg/kg	400		102	78-132	11.4	18	
Surrogate: 1-Chlorooctane	52.9		mg/kg	50.0		106	41-142			
Surrogate: 1-Chlorooctadecane	51.3		mg/kg	50.0		103	37.6-147			

Batch 9052902 - General Prep - Organics**Blank (9052902-BLK1)**

Prepared & Analyzed: 29-May-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	50.2		mg/kg	50.0		100	41-142			
Surrogate: 1-Chlorooctadecane	50.3		mg/kg	50.0		101	37.6-147			

LCS (9052902-BS1)

Prepared & Analyzed: 29-May-19

GRO C6-C10	200	10.0	mg/kg	200		99.8	76.5-133			
DRO >C10-C28	208	10.0	mg/kg	200		104	72.9-138			
Total TPH C6-C28	407	10.0	mg/kg	400		102	78-132			
Surrogate: 1-Chlorooctane	53.4		mg/kg	50.0		107	41-142			
Surrogate: 1-Chlorooctadecane	51.5		mg/kg	50.0		103	37.6-147			

LCS Dup (9052902-BSD1)

Prepared & Analyzed: 29-May-19

GRO C6-C10	201	10.0	mg/kg	200		101	76.5-133	0.718	20.6	
DRO >C10-C28	217	10.0	mg/kg	200		108	72.9-138	4.22	20.6	
Total TPH C6-C28	418	10.0	mg/kg	400		104	78-132	2.52	18	
Surrogate: 1-Chlorooctane	52.6		mg/kg	50.0		105	41-142			
Surrogate: 1-Chlorooctadecane	50.5		mg/kg	50.0		101	37.6-147			

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Analytical Results For:

TETRA TECH
901 WEST WALL STREET, STE 100
MIDLAND TX, 79701

Project: DORSTATE SWD
Project Number: 212C-MD-01743
Project Manager: CLAIR GONZALES
Fax To: (432) 682-3946

Reported:
31-May-19 10:00

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9053005 - General Prep - Organics**Blank (9053005-BLK1)**

Prepared & Analyzed: 30-May-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	49.5		mg/kg	50.0		99.0	41-142			
Surrogate: 1-Chlorooctadecane	52.6		mg/kg	50.0		105	37.6-147			

LCS (9053005-BS1)

Prepared & Analyzed: 30-May-19

GRO C6-C10	191	10.0	mg/kg	200		95.7	76.5-133			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	72.9-138			
Total TPH C6-C28	390	10.0	mg/kg	400		97.5	78-132			
Surrogate: 1-Chlorooctane	51.0		mg/kg	50.0		102	41-142			
Surrogate: 1-Chlorooctadecane	50.4		mg/kg	50.0		101	37.6-147			

LCS Dup (9053005-BSD1)

Prepared & Analyzed: 30-May-19

GRO C6-C10	184	10.0	mg/kg	200		91.8	76.5-133	4.18	20.6	
DRO >C10-C28	184	10.0	mg/kg	200		92.0	72.9-138	7.57	20.6	
Total TPH C6-C28	368	10.0	mg/kg	400		91.9	78-132	5.90	18	
Surrogate: 1-Chlorooctane	53.3		mg/kg	50.0		107	41-142			
Surrogate: 1-Chlorooctadecane	53.0		mg/kg	50.0		106	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

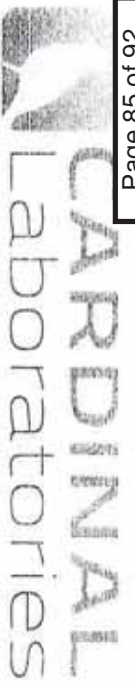
S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Tetra Tech Project Manager: Claire Gonzales		P.O. #: Company: Attn: Address: City: State: Zip:		BILL TO		ANALYSIS REQUEST	
Address: City: Phone #: Fax #: Project #: 212C-MD-0743 Project Name: Dorstate SUD Project Location: Eddy Co. Sample Name: Clint Merritt		State: Zip: Project Owner: PWC		City: State: Zip:		P.O. #: Company: Attn: Address: City: State: Zip:	
Lab I.D. H901801		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS	
1 2 3 4 5 6 7 8 9 10		SP-20 (6-1) (2-3) (4-5) (6-7) (8-10) SP-21 (0-1) (2-3) (4-5) (6-7) (8-10)		MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER		PRESERV. ACID/BASE ICE / COOL OTHER	
DATE 5/17 TIME 14:00		DATE 5/16 TIME 13:30		DATE 5/16 TIME 13:30		DATE 5/16 TIME 13:30	
Relinquished By: <i>[Signature]</i>		Received By: <i>[Signature]</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/>		CHECKED BY: <i>[Signature]</i>		Add'l Fax #:	
Relinquished By: <i>[Signature]</i>		Received By: <i>[Signature]</i>		REMARKS:		REMARKS:	

101 East Marland, Hobbs, NM 88240
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Released to Imaging: 7/29/2021 3:19:33 PM

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Released to Imaging: 7/29/2021 3:19:33 PM

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

November 12, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: DORSTATE SWD

Enclosed are the results of analyses for samples received by the laboratory on 11/11/19 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	11/11/2019	Sampling Date:	11/11/2019
Reported:	11/12/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01995	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: HORIZONTAL - 22 (0-1') (H903828-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/12/2019	ND	1.79	89.7	2.00	1.84		
Toluene*	<0.050	0.050	11/12/2019	ND	1.80	89.9	2.00	1.65		
Ethylbenzene*	<0.050	0.050	11/12/2019	ND	1.82	90.9	2.00	1.61		
Total Xylenes*	<0.150	0.150	11/12/2019	ND	5.44	90.7	6.00	1.64		
Total BTEX	<0.300	0.300	11/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	11/12/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/12/2019	ND	196	97.9	200	0.299	
DRO >C10-C28*	<10.0	10.0	11/12/2019	ND	193	96.7	200	0.298	
EXT DRO >C28-C36	<10.0	10.0	11/12/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink that reads "Caley D. Keene".

Caley D. Keene, Lab Director/Quality Manager



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November 12, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: DORSTATE SWD

Enclosed are the results of analyses for samples received by the laboratory on 11/11/19 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Coley D. Keene". The signature is written in a cursive style with a large, stylized 'C' at the beginning.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	11/11/2019	Sampling Date:	11/11/2019
Reported:	11/12/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01995	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: HORIZONTAL - 2 (1) (0-1') (H903829-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/12/2019	ND	1.79	89.7	2.00	1.84		
Toluene*	<0.050	0.050	11/12/2019	ND	1.80	89.9	2.00	1.65		
Ethylbenzene*	<0.050	0.050	11/12/2019	ND	1.82	90.9	2.00	1.61		
Total Xylenes*	<0.150	0.150	11/12/2019	ND	5.44	90.7	6.00	1.64		
Total BTEX	<0.300	0.300	11/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	11/12/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/12/2019	ND	196	97.9	200	0.299	
DRO >C10-C28*	<10.0	10.0	11/12/2019	ND	193	96.7	200	0.298	
EXT DRO >C28-C36	<10.0	10.0	11/12/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink that reads "Caley D. Keene".

Caley D. Keene, Lab Director/Quality Manager



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November 12, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: DORSTATE SWD

Enclosed are the results of analyses for samples received by the laboratory on 11/11/19 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	11/11/2019	Sampling Date:	11/11/2019
Reported:	11/12/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01995	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: HORIZONTAL - 21 (0-1') (H903830-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/12/2019	ND	1.79	89.7	2.00	1.84		
Toluene*	<0.050	0.050	11/12/2019	ND	1.80	89.9	2.00	1.65		
Ethylbenzene*	<0.050	0.050	11/12/2019	ND	1.82	90.9	2.00	1.61		
Total Xylenes*	<0.150	0.150	11/12/2019	ND	5.44	90.7	6.00	1.64		
Total BTEX	<0.300	0.300	11/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/12/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/12/2019	ND	196	97.9	200	0.299	
DRO >C10-C28*	<10.0	10.0	11/12/2019	ND	193	96.7	200	0.298	
EXT DRO >C28-C36	<10.0	10.0	11/12/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
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***	Insufficient time to reach temperature.
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Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

501 W. Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Page 1 of 1

[illegible]

ORIGINAL COPY

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB USE ONLY

REMARKS: ☐ STANDARD

Sample Temperature

☒ **RUSH:** Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized☐ Special Report Limits or TRRP Report

(Circle) ~~HAND DELIVERED~~ FEDEX UPS Tracking #



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

November 12, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: DORSTATE SWD

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET, STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	11/11/2019	Sampling Date:	11/11/2019
Reported:	11/12/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01995	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: HORIZONTAL - 12 (0-1') (H903831-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/12/2019	ND	1.79	89.7	2.00	1.84		
Toluene*	<0.050	0.050	11/12/2019	ND	1.80	89.9	2.00	1.65		
Ethylbenzene*	<0.050	0.050	11/12/2019	ND	1.82	90.9	2.00	1.61		
Total Xylenes*	<0.150	0.150	11/12/2019	ND	5.44	90.7	6.00	1.64		
Total BTEX	<0.300	0.300	11/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/12/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/12/2019	ND	196	97.9	200	0.299	
DRO >C10-C28*	<10.0	10.0	11/12/2019	ND	193	96.7	200	0.298	
EXT DRO >C28-C36	<10.0	10.0	11/12/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CLAIR GONZALES
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	11/11/2019	Sampling Date:	11/11/2019
Reported:	11/12/2019	Sampling Type:	Soil
Project Name:	DORSTATE SWD	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01995	Sample Received By:	Tamara Oldaker
Project Location:	PWS - EDDY CO NM		

Sample ID: HORIZONTAL - 12 (1-2') (H903831-02)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/12/2019	ND	1.79	89.7	2.00	1.84		
Toluene*	<0.050	0.050	11/12/2019	ND	1.80	89.9	2.00	1.65		
Ethylbenzene*	<0.050	0.050	11/12/2019	ND	1.82	90.9	2.00	1.61		
Total Xylenes*	<0.150	0.150	11/12/2019	ND	5.44	90.7	6.00	1.64		
Total BTEX	<0.300	0.300	11/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/12/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/12/2019	ND	196	97.9	200	0.299	
DRO >C10-C28*	<10.0	10.0	11/12/2019	ND	193	96.7	200	0.298	
EXT DRO >C28-C36	<10.0	10.0	11/12/2019	ND					

Surrogate: 1-Chlorooctane 98.0 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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* = Accredited Analyte

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A handwritten signature in black ink that reads "Caley D. Keene".

Caley D. Keene, Lab Director/Quality Manager

Analytical Report 641244

for
Tetra Tech- Midland

Project Manager: Clair Gonzales

P.W.S. Dorstate SWD

04-NOV-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



04-NOV-19

Project Manager: **Clair Gonzales**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **641244**

P.W.S. Dorstate SWD

Project Address: Eddy Co, NM

Clair Gonzales:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 641244. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 641244 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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Sample Cross Reference 641244

Tetra Tech- Midland, Midland, TX

P.W.S. Dorstate SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Borehole #22 (0-1')	S	10-25-19 00:00	0 - 1 ft	641244-001
Borehole #22 (2-3')	S	10-25-19 00:00	2 - 3 ft	641244-002
Borehole #22 (4-5')	S	10-25-19 00:00	4 - 5 ft	641244-003
Borehole #22 (6-7')	S	10-25-19 00:00	6 - 7 ft	641244-004
Borehole #22 (9-10')	S	10-25-19 00:00	9 - 10 ft	641244-005
Borehole #22 (14-15')	S	10-25-19 00:00	14 - 15 ft	641244-006
Borehole #22 (19-20')	S	10-25-19 00:00	19 - 20 ft	641244-007
Borehole #22 (24-25')	S	10-25-19 00:00	24 - 25 ft	641244-008
Borehole #22 (29-30')	S	10-25-19 00:00	29 - 30 ft	641244-009
Borehole #23 (0-1')	S	10-25-19 00:00	0 - 1 ft	641244-010
Borehole #23 (2-3')	S	10-25-19 00:00	2 - 3 ft	641244-011
Borehole #23 (4-5')	S	10-25-19 00:00	4 - 5 ft	641244-012
Borehole #23 (6-7')	S	10-25-19 00:00	6 - 7 ft	641244-013
Borehole #23 (9-10')	S	10-25-19 00:00	9 - 10 ft	641244-014
Borehole #23 (14-15')	S	10-25-19 00:00	14 - 15 ft	641244-015
Borehole #23 (19-20')	S	10-25-19 00:00	19 - 20 ft	641244-016
Borehole #23 (24-25')	S	10-25-19 00:00	24 - 25 ft	641244-017
Borehole #23 (29-30')	S	10-25-19 00:00	29 - 30 ft	641244-018
Borehole #24 (0-1')	S	10-25-19 00:00	0 - 1 ft	641244-019
Borehole #24 (2-3')	S	10-25-19 00:00	2 - 3 ft	641244-020
Borehole #24 (4-5')	S	10-25-19 00:00	4 - 5 ft	641244-021
Borehole #24 (6-7')	S	10-25-19 00:00	6 - 7 ft	641244-022
Borehole #24 (9-10')	S	10-25-19 00:00	9 - 10 ft	641244-023
Borehole #24 (14-15')	S	10-25-19 00:00	14 - 15 ft	641244-024
Borehole #24 (19-20')	S	10-25-19 00:00	19 - 20 ft	641244-025
Borehole #24 (24-25')	S	10-25-19 00:00	24 - 25 ft	641244-026
Borehole #24 (29-30')	S	10-25-19 00:00	29 - 30 ft	641244-027

**CASE NARRATIVE***Client Name: Tetra Tech- Midland**Project Name: P.W.S. Dorstate SWD*

Project ID:

Work Order Number(s): 641244

Report Date: 04-NOV-19

Date Received: 10/25/2019

Sample receipt non conformances and comments:None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3105845 Inorganic Anions by EPA 300/300.1

Lab Sample ID 641244-019 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 641244-008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020, -021, -022, -023, -024, -025, -026, -027.

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

Batch: LBA-3106322 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 641244-001, 641244-005, 641244-002.

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

Batch: LBA-3106326 BTEX by EPA 8021B

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



Certificate of Analysis Summary 641244

Tetra Tech- Midland, Midland, TX

Project Name: P.W.S. Dorstate SWD

Project Id:

Contact: Clair Gonzales

Project Location: Eddy Co, NM

Date Received in Lab: Fri Oct-25-19 02:40 pm

Report Date: 04-NOV-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641244-001	641244-002	641244-003	641244-004	641244-005	641244-006
	<i>Field Id:</i>	Borehole #22 (0-1')	Borehole #22 (2-3')	Borehole #22 (4-5')	Borehole #22 (6-7')	Borehole #22 (9-10')	Borehole #22 (14-15')
	<i>Depth:</i>	0-1 ft	2-3 ft	4-5 ft	6-7 ft	9-10 ft	14-15 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-31-19 12:00	Oct-31-19 12:00	Oct-31-19 12:00	Oct-31-19 12:00	Oct-31-19 12:00	Oct-31-19 12:00
	<i>Analyzed:</i>	Nov-02-19 17:10	Nov-02-19 17:30	Nov-02-19 17:50	Nov-02-19 18:10	Nov-02-19 18:30	Nov-02-19 18:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198
Toluene		0.0422 0.00200	0.0222 0.00198	0.0153 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198
Ethylbenzene		0.0281 0.00200	0.0220 0.00198	0.0223 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198
m,p-Xylenes		0.336 0.00400	0.265 0.00396	0.110 0.00398	0.0261 0.00398	<0.00399 0.00399	<0.00397 0.00397
o-Xylene		0.102 0.00200	0.0819 0.00198	0.0876 0.00199	0.00812 0.00199	<0.00200 0.00200	<0.00198 0.00198
Total Xylenes		0.438 0.00200	0.347 0.00198	0.198 0.00199	0.0342 0.00199	<0.00200 0.00200	<0.00198 0.00198
Total BTEX		0.508 0.00200	0.391 0.00198	0.235 0.00199	0.0342 0.00199	<0.00200 0.00200	<0.00198 0.00198
Inorganic Anions by EPA 300/300.1 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 13:30	Oct-29-19 13:30	Oct-29-19 13:30	Oct-29-19 13:30	Oct-29-19 13:30	Oct-29-19 13:30
	<i>Analyzed:</i>	Oct-29-19 15:55	Oct-29-19 16:15	Oct-29-19 16:21	Oct-29-19 16:28	Oct-29-19 16:35	Oct-29-19 16:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		677 25.0	957 24.8	1560 24.9	1380 5.02	1800 25.3	1930 24.9
TPH By SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00
	<i>Analyzed:</i>	Oct-30-19 08:28	Oct-30-19 08:49	Oct-29-19 15:00	Oct-29-19 13:16	Oct-29-19 15:21	Oct-29-19 15:42
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		1150 250	705 249	186 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8
Diesel Range Organics (DRO)		13100 250	8840 249	3580 50.0	783 49.9	318 49.9	198 49.8
Motor Oil Range Hydrocarbons (MRO)		1550 250	933 249	369 50.0	79.9 49.9	72.2 49.9	<49.8 49.8
Total TPH		15800 250	10500 249	4140 50.0	863 49.9	390 49.9	198 49.8

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641244

Tetra Tech- Midland, Midland, TX

Project Name: P.W.S. Dorstate SWD

Project Id:

Contact: Clair Gonzales

Project Location: Eddy Co, NM

Date Received in Lab: Fri Oct-25-19 02:40 pm

Report Date: 04-NOV-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641244-007	641244-008	641244-009	641244-010	641244-011	641244-012
	<i>Field Id:</i>	Borehole #22 (19-20')	Borehole #22 (24-25')	Borehole #22 (29-30')	Borehole #23 (0-1')	Borehole #23 (2-3')	Borehole #23 (4-5')
	<i>Depth:</i>	19-20 ft	24-25 ft	29-30 ft	0-1 ft	2-3 ft	4-5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-31-19 12:00	Oct-31-19 12:00	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00
	<i>Analyzed:</i>	Nov-02-19 19:11	Nov-02-19 19:31	Nov-02-19 22:50	Nov-02-19 23:10	Nov-02-19 23:30	Nov-02-19 23:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	0.00254 0.00200	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00397 0.00397	<0.00399 0.00399	<0.00397 0.00397	0.0134 0.00401	<0.00403 0.00403	<0.00398 0.00398
o-Xylene		<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	0.00576 0.00200	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	0.0192 0.00200	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	0.0217 0.00200	<0.00202 0.00202	<0.00199 0.00199
Inorganic Anions by EPA 300/300.1 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 13:30	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00
	<i>Analyzed:</i>	Oct-29-19 16:48	Oct-29-19 14:34	Oct-29-19 14:51	Oct-29-19 14:57	Oct-29-19 15:03	Oct-29-19 15:09
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1660 24.9	598 4.98	1160 4.95	398 4.99	415 25.0	348 5.04
TPH By SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00
	<i>Analyzed:</i>	Oct-29-19 16:03	Oct-29-19 16:24	Oct-29-19 16:45	Oct-29-19 17:06	Oct-29-19 17:48	Oct-29-19 18:09
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<49.9 49.9	58.1 49.9	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		87.9 50.0	<49.8 49.8	<49.9 49.9	2320 49.9	430 49.9	424 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<49.9 49.9	305 49.9	63.0 49.9	60.6 50.0
Total TPH		87.9 50.0	<49.8 49.8	<49.9 49.9	2680 49.9	493 49.9	485 50.0

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641244

Tetra Tech- Midland, Midland, TX

Project Name: P.W.S. Dorstate SWD

Project Id:

Contact: Clair Gonzales

Project Location: Eddy Co, NM

Date Received in Lab: Fri Oct-25-19 02:40 pm

Report Date: 04-NOV-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641244-013	641244-014	641244-015	641244-016	641244-017	641244-018
	<i>Field Id:</i>	Borehole #23 (6-7')	Borehole #23 (9-10')	Borehole #23 (14-15')	Borehole #23 (19-20')	Borehole #23 (24-25')	Borehole #23 (29-30')
	<i>Depth:</i>	6-7 ft	9-10 ft	14-15 ft	19-20 ft	24-25 ft	29-30 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00
	<i>Analyzed:</i>	Nov-03-19 00:10	Nov-03-19 00:30	Nov-03-19 00:50	Nov-03-19 01:11	Nov-03-19 01:31	Nov-03-19 01:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00400 0.00400	<0.00402 0.00402	<0.00398 0.00398	<0.00397 0.00397	<0.00404 0.00404	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Inorganic Anions by EPA 300/300.1 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00
	<i>Analyzed:</i>	Oct-29-19 15:26	Oct-29-19 15:32	Oct-29-19 15:38	Oct-29-19 15:44	Oct-29-19 15:50	Oct-29-19 16:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		424 5.02	403 4.99	1310 5.05	1490 25.3	1520 25.3	2640 25.0
TPH By SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 11:00
	<i>Analyzed:</i>	Oct-29-19 18:30	Oct-29-19 18:51	Oct-29-19 19:12	Oct-29-19 19:33	Oct-29-19 19:54	Oct-29-19 20:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.8 49.8
Total TPH		<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.8 49.8

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641244

Tetra Tech- Midland, Midland, TX

Project Name: P.W.S. Dorstate SWD

Project Id:

Contact: Clair Gonzales

Project Location: Eddy Co, NM

Date Received in Lab: Fri Oct-25-19 02:40 pm

Report Date: 04-NOV-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641244-019	641244-020	641244-021	641244-022	641244-023	641244-024
	<i>Field Id:</i>	Borehole #24 (0-1')	Borehole #24 (2-3')	Borehole #24 (4-5')	Borehole #24 (6-7')	Borehole #24 (9-10')	Borehole #24 (14-15')
	<i>Depth:</i>	0-1 ft	2-3 ft	4-5 ft	6-7 ft	9-10 ft	14-15 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00
	<i>Analyzed:</i>	Nov-03-19 03:09	Nov-03-19 03:30	Nov-03-19 03:51	Nov-03-19 04:11	Nov-03-19 04:31	Nov-03-19 04:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
m,p-Xylenes		<0.00398 0.00398	0.0156 0.00398	0.0142 0.00402	<0.00402 0.00402	<0.00404 0.00404	<0.00396 0.00396
o-Xylene		<0.00199 0.00199	0.00899 0.00199	0.0126 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Total Xylenes		<0.00199 0.00199	0.0246 0.00199	0.0268 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Total BTEX		<0.00199 0.00199	0.0246 0.00199	0.0268 0.00201	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Inorganic Anions by EPA 300/300.1 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00
	<i>Analyzed:</i>	Oct-29-19 15:55	Oct-29-19 16:19	Oct-29-19 16:36	Oct-29-19 16:42	Oct-29-19 16:48	Oct-29-19 16:54
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		840 4.98	983 4.96	2810 25.0	362 4.95	1100 4.95	1290 25.1
TPH By SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 11:00	Oct-29-19 11:00	Oct-29-19 17:00	Oct-29-19 17:00	Oct-29-19 17:00	Oct-29-19 17:00
	<i>Analyzed:</i>	Oct-29-19 20:36	Oct-29-19 20:57	Oct-29-19 23:45	Oct-29-19 22:42	Oct-30-19 00:06	Oct-30-19 00:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		156 49.9	105 50.0	67.2 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		7170 49.9	4360 50.0	2310 49.8	161 49.9	94.5 50.0	70.4 49.9
Motor Oil Range Hydrocarbons (MRO)		906 49.9	538 50.0	245 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9
Total TPH		8230 49.9	5000 50.0	2620 49.8	161 49.9	94.5 50.0	70.4 49.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641244

Tetra Tech- Midland, Midland, TX

Project Name: P.W.S. Dorstate SWD

Project Id:

Contact: Clair Gonzales

Project Location: Eddy Co, NM

Date Received in Lab: Fri Oct-25-19 02:40 pm

Report Date: 04-NOV-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641244-025	641244-026	641244-027			
	<i>Field Id:</i>	Borehole #24 (19-20')	Borehole #24 (24-25')	Borehole #24 (29-30')			
	<i>Depth:</i>	19-20 ft	24-25 ft	29-30 ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00			
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Nov-02-19 16:00	Nov-02-19 16:00	Nov-02-19 16:00			
	<i>Analyzed:</i>	Nov-03-19 05:11	Nov-03-19 05:31	Nov-03-19 05:52			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00402 0.00402			
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201			
Inorganic Anions by EPA 300/300.1 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00			
	<i>Analyzed:</i>	Oct-29-19 16:59	Oct-29-19 17:05	Oct-29-19 17:11			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		400 5.00	1590 24.8	2470 25.2			
TPH By SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 17:00	Oct-29-19 17:00	Oct-29-19 17:00			
	<i>Analyzed:</i>	Oct-30-19 00:48	Oct-30-19 01:08	Oct-30-19 01:29			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9			
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9			
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9			
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9			

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Jessica Kramer

Jessica Kramer
Project Assistant



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3105833

Sample: 641244-004 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 13:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.4	99.7	86	70-135	
o-Terphenyl	46.6	49.9	93	70-135	

Lab Batch #: 3105833

Sample: 641244-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 15:00

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.0	99.9	87	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 3105833

Sample: 641244-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 15:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.6	99.7	80	70-135	
o-Terphenyl	42.2	49.9	85	70-135	

Lab Batch #: 3105833

Sample: 641244-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 15:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.9	99.6	76	70-135	
o-Terphenyl	40.0	49.8	80	70-135	

Lab Batch #: 3105833

Sample: 641244-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 16:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.4	99.9	77	70-135	
o-Terphenyl	40.9	50.0	82	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3105833

Sample: 641244-008 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 16:24

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.5	99.6	77	70-135	
o-Terphenyl	40.6	49.8	82	70-135	

Lab Batch #: 3105833

Sample: 641244-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 16:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.7	99.7	77	70-135	
o-Terphenyl	40.9	49.9	82	70-135	

Lab Batch #: 3105833

Sample: 641244-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 17:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.6	99.8	83	70-135	
o-Terphenyl	51.2	49.9	103	70-135	

Lab Batch #: 3105833

Sample: 641244-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 17:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.8	99.7	77	70-135	
o-Terphenyl	42.5	49.9	85	70-135	

Lab Batch #: 3105833

Sample: 641244-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 18:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.1	100	90	70-135	
o-Terphenyl	48.9	50.0	98	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3105833

Sample: 641244-013 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 18:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.9	99.9	78	70-135	
o-Terphenyl	41.3	50.0	83	70-135	

Lab Batch #: 3105833

Sample: 641244-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 18:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.9	99.6	74	70-135	
o-Terphenyl	37.9	49.8	76	70-135	

Lab Batch #: 3105833

Sample: 641244-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 19:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	74.5	99.7	75	70-135	
o-Terphenyl	38.7	49.9	78	70-135	

Lab Batch #: 3105833

Sample: 641244-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 19:33

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.4	99.9	75	70-135	
o-Terphenyl	39.8	50.0	80	70-135	

Lab Batch #: 3105833

Sample: 641244-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 19:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.0	100	77	70-135	
o-Terphenyl	40.5	50.0	81	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3105833

Sample: 641244-018 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 20:15

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.0	99.6	78	70-135	
o-Terphenyl	41.4	49.8	83	70-135	

Lab Batch #: 3105833

Sample: 641244-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 20:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	99.7	94	70-135	
o-Terphenyl	44.0	49.9	88	70-135	

Lab Batch #: 3105833

Sample: 641244-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 20:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.9	99.9	82	70-135	
o-Terphenyl	42.5	50.0	85	70-135	

Lab Batch #: 3105836

Sample: 641244-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 22:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.0	99.7	78	70-135	
o-Terphenyl	41.4	49.9	83	70-135	

Lab Batch #: 3105836

Sample: 641244-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 23:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.5	99.6	85	70-135	
o-Terphenyl	42.6	49.8	86	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3105836

Sample: 641244-023 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/19 00:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.3	99.9	80	70-135	
o-Terphenyl	42.5	50.0	85	70-135	

Lab Batch #: 3105836

Sample: 641244-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/19 00:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.9	99.7	79	70-135	
o-Terphenyl	42.0	49.9	84	70-135	

Lab Batch #: 3105836

Sample: 641244-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/19 00:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.0	99.9	82	70-135	
o-Terphenyl	43.2	50.0	86	70-135	

Lab Batch #: 3105836

Sample: 641244-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/19 01:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.0	100	79	70-135	
o-Terphenyl	41.8	50.0	84	70-135	

Lab Batch #: 3105836

Sample: 641244-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/19 01:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.2	99.7	79	70-135	
o-Terphenyl	41.9	49.9	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3105833

Sample: 641244-001 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/19 08:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	55.7	50.0	111	70-135	

Lab Batch #: 3105833

Sample: 641244-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/19 08:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	99.6	100	70-135	
o-Terphenyl	48.6	49.8	98	70-135	

Lab Batch #: 3106322

Sample: 641244-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 17:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	70-130	
4-Bromofluorobenzene	0.0550	0.0300	183	70-130	**

Lab Batch #: 3106322

Sample: 641244-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 17:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	70-130	
4-Bromofluorobenzene	0.0472	0.0300	157	70-130	**

Lab Batch #: 3106322

Sample: 641244-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 17:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	70-130	
4-Bromofluorobenzene	0.0481	0.0300	160	70-130	**

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3106322

Sample: 641244-004 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 18:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	70-130	
4-Bromofluorobenzene	0.0339	0.0300	113	70-130	

Lab Batch #: 3106322

Sample: 641244-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 18:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0340	0.0300	113	70-130	

Lab Batch #: 3106322

Sample: 641244-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 18:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	70-130	
4-Bromofluorobenzene	0.0366	0.0300	122	70-130	

Lab Batch #: 3106322

Sample: 641244-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 19:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	70-130	
4-Bromofluorobenzene	0.0356	0.0300	119	70-130	

Lab Batch #: 3106322

Sample: 641244-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 19:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0377	0.0300	126	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3106326

Sample: 641244-009 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 22:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	70-130	
4-Bromofluorobenzene	0.0345	0.0300	115	70-130	

Lab Batch #: 3106326

Sample: 641244-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 23:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	70-130	
4-Bromofluorobenzene	0.0332	0.0300	111	70-130	

Lab Batch #: 3106326

Sample: 641244-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 23:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	70-130	
4-Bromofluorobenzene	0.0356	0.0300	119	70-130	

Lab Batch #: 3106326

Sample: 641244-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 23:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0361	0.0300	120	70-130	

Lab Batch #: 3106326

Sample: 641244-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 00:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0330	0.0300	110	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3106326

Sample: 641244-014 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 00:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0341	0.0300	114	70-130	

Lab Batch #: 3106326

Sample: 641244-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 00:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0344	0.0300	115	70-130	

Lab Batch #: 3106326

Sample: 641244-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 01:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0327	0.0300	109	70-130	

Lab Batch #: 3106326

Sample: 641244-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 01:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0316	0.0300	105	70-130	

Lab Batch #: 3106326

Sample: 641244-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 01:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	70-130	
4-Bromofluorobenzene	0.0290	0.0300	97	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3106326

Sample: 641244-019 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 03:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	70-130	
4-Bromofluorobenzene	0.0244	0.0300	81	70-130	

Lab Batch #: 3106326

Sample: 641244-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 03:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	70-130	
4-Bromofluorobenzene	0.0379	0.0300	126	70-130	

Lab Batch #: 3106326

Sample: 641244-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 03:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	70-130	
4-Bromofluorobenzene	0.0356	0.0300	119	70-130	

Lab Batch #: 3106326

Sample: 641244-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 04:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	70-130	
4-Bromofluorobenzene	0.0374	0.0300	125	70-130	

Lab Batch #: 3106326

Sample: 641244-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 04:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	70-130	
4-Bromofluorobenzene	0.0354	0.0300	118	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3106326

Sample: 641244-024 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 04:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0385	0.0300	128	70-130	

Lab Batch #: 3106326

Sample: 641244-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 05:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	70-130	
4-Bromofluorobenzene	0.0352	0.0300	117	70-130	

Lab Batch #: 3106326

Sample: 641244-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 05:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0301	0.0300	100	70-130	

Lab Batch #: 3106326

Sample: 641244-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/19 05:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0337	0.0300	112	70-130	

Lab Batch #: 3105833

Sample: 7689177-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/19 12:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.1	100	76	70-135	
o-Terphenyl	40.4	50.0	81	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3105836

Sample: 7689180-1-BLK / BLK

Project ID:

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/19 21:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.2	100	92	70-135	
o-Terphenyl	49.1	50.0	98	70-135	

Lab Batch #: 3106322

Sample: 7689370-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/01/19 21:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	70-130	
4-Bromofluorobenzene	0.0264	0.0300	88	70-130	

Lab Batch #: 3106326

Sample: 7689457-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/02/19 22:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0304	0.0300	101	70-130	

Lab Batch #: 3105833

Sample: 7689177-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/19 12:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	100	93	70-135	
o-Terphenyl	46.3	50.0	93	70-135	

Lab Batch #: 3105836

Sample: 7689180-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/19 22:00

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.7	100	86	70-135	
o-Terphenyl	43.2	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3106322

Sample: 7689370-1-BKS / BKS

Project ID:

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/01/19 19:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0325	0.0300	108	70-130	

Lab Batch #: 3106326

Sample: 7689457-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/02/19 20:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	70-130	
4-Bromofluorobenzene	0.0294	0.0300	98	70-130	

Lab Batch #: 3105833

Sample: 7689177-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/19 12:55

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	100	92	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 3105836

Sample: 7689180-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/19 22:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	100	85	70-135	
o-Terphenyl	43.1	50.0	86	70-135	

Lab Batch #: 3106322

Sample: 7689370-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/01/19 20:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0322	0.0300	107	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3106326

Sample: 7689457-1-BSD / BSD

Project ID:

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/02/19 21:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0301	0.0300	100	70-130	

Lab Batch #: 3105833

Sample: 641244-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 13:37

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.9	99.7	92	70-135	
o-Terphenyl	45.1	49.9	90	70-135	

Lab Batch #: 3105836

Sample: 641244-022 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 23:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.5	99.9	90	70-135	
o-Terphenyl	45.4	50.0	91	70-135	

Lab Batch #: 3106322

Sample: 641117-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 20:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	70-130	
4-Bromofluorobenzene	0.0349	0.0300	116	70-130	

Lab Batch #: 3106326

Sample: 641244-009 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 21:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0345	0.0300	115	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: P.W.S. Dorstate SWD

Work Orders : 641244,

Lab Batch #: 3105833

Sample: 641244-004 SD / MSD

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 13:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	99.9	94	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 3105836

Sample: 641244-022 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/19 23:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	100	92	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

Lab Batch #: 3106322

Sample: 641117-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 20:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0364	0.0300	121	70-130	

Lab Batch #: 3106326

Sample: 641244-009 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 21:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0319	0.0300	106	70-130	
4-Bromofluorobenzene	0.0342	0.0300	114	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: P.W.S. Dorstate SWD

Work Order #: 641244

Analyst: KTL

Date Prepared: 10/31/2019

Project ID:

Date Analyzed: 11/01/2019

Lab Batch ID: 3106322

Sample: 7689370-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00200	0.100	0.0983	98	0.100	0.0922	92	6	70-130	35	
Toluene	<0.00200	0.100	0.0885	89	0.100	0.0868	87	2	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0894	89	0.100	0.0858	86	4	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.180	90	0.200	0.173	87	4	70-130	35	
o-Xylene	<0.00200	0.100	0.0855	86	0.100	0.0844	84	1	70-130	35	

Analyst: KTL

Date Prepared: 11/02/2019

Date Analyzed: 11/02/2019

Lab Batch ID: 3106326

Sample: 7689457-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00200	0.100	0.100	100	0.100	0.0944	94	6	70-130	35	
Toluene	<0.00200	0.100	0.0956	96	0.100	0.0891	89	7	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0930	93	0.100	0.0861	86	8	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.200	0.174	87	8	70-130	35	
o-Xylene	<0.00200	0.100	0.0871	87	0.100	0.0856	86	2	70-130	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Blank Spike Recovery [D] = 100*(C)/[B]

Blank Spike Duplicate Recovery [G] = 100*(F)/[E]

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: P.W.S. Dorstate SWD

Work Order #: 641244

Analyst: SPC

Date Prepared: 10/29/2019

Project ID:

Date Analyzed: 10/29/2019

Lab Batch ID: 3105847

Sample: 7689138-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	244	98	250	244	98	0	90-110	20	

Analyst: CHE

Date Prepared: 10/29/2019

Date Analyzed: 10/29/2019

Lab Batch ID: 3105845

Sample: 7689140-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	237	95	250	239	96	1	90-110	20	

Analyst: ARM

Date Prepared: 10/29/2019

Date Analyzed: 10/29/2019

Lab Batch ID: 3105833

Sample: 7689177-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	940	94	1000	966	97	3	70-135	20	
Diesel Range Organics (DRO)	<50.0	1000	1000	100	1000	1010	101	1	70-135	20	

Relative Percent Difference RPD = $200 * [(C-F)/(C+F)]$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: P.W.S. Dorstate SWD

Work Order #: 641244

Project ID:

Analyst: ARM

Date Prepared: 10/29/2019

Date Analyzed: 10/29/2019

Lab Batch ID: 3105836

Sample: 7689180-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	885	89	1000	857	86	3	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	948	95	1000	910	91	4	70-135	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries

Project Name: P.W.S. Dorstate SWD

Work Order #: 641244

Project ID:

Lab Batch ID: 3106322

QC- Sample ID: 641117-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/01/2019

Date Prepared: 10/31/2019

Analyst: KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00199	0.0994	0.0960	97	0.0996	0.0980	98	2	70-130	35	
Toluene	<0.00199	0.0994	0.0748	75	0.0996	0.0846	85	12	70-130	35	
Ethylbenzene	<0.00199	0.0994	0.0787	79	0.0996	0.0875	88	11	70-130	35	
m,p-Xylenes	<0.00398	0.199	0.153	77	0.199	0.174	87	13	70-130	35	
o-Xylene	<0.00199	0.0994	0.0835	84	0.0996	0.0916	92	9	70-130	35	

Lab Batch ID: 3106326

QC- Sample ID: 641244-009 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/02/2019

Date Prepared: 11/02/2019

Analyst: KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00165	0.0826	0.0886	107	0.0998	0.104	104	16	70-130	35	
Toluene	<0.00165	0.0826	0.0875	106	0.0998	0.0983	98	12	70-130	35	
Ethylbenzene	<0.00165	0.0826	0.0857	104	0.0998	0.0965	97	12	70-130	35	
m,p-Xylenes	<0.00331	0.165	0.175	106	0.200	0.195	98	11	70-130	35	
o-Xylene	<0.00165	0.0826	0.0834	101	0.0998	0.0927	93	11	70-130	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries

Project Name: P.W.S. Dorstate SWD

Work Order #: 641244

Project ID:

Lab Batch ID: 3105845

QC- Sample ID: 641244-008 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/29/2019

Date Prepared: 10/29/2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	598	249	664	27	249	652	22	2	90-110	20	X

Lab Batch ID: 3105845

QC- Sample ID: 641244-019 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/29/2019

Date Prepared: 10/29/2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	840	249	1040	80	249	1050	84	1	90-110	20	X

Lab Batch ID: 3105847

QC- Sample ID: 640749-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/29/2019

Date Prepared: 10/29/2019

Analyst: SPC

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	302	252	550	98	252	552	99	0	90-110	20	

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

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

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



Form 3 - MS / MSD Recoveries

Project Name: P.W.S. Dorstate SWD

Work Order #: 641244

Project ID:

Lab Batch ID: 3105847

QC- Sample ID: 640878-013 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/29/2019

Date Prepared: 10/29/2019

Analyst: SPC

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	128	249	374	99	249	375	99	0	90-110	20	

Lab Batch ID: 3105833

QC- Sample ID: 641244-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/29/2019

Date Prepared: 10/29/2019

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	24.1	997	879	86	999	894	87	2	70-135	20	
Diesel Range Organics (DRO)	783	997	1710	93	999	1750	97	2	70-135	20	

Lab Batch ID: 3105836

QC- Sample ID: 641244-022 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/29/2019

Date Prepared: 10/29/2019

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	936	94	1000	974	97	4	70-135	20	
Diesel Range Organics (DRO)	161	999	1190	103	1000	1220	106	2	70-135	20	

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

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

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



Chain of Custody

Work Order No: 1011244

Houston, TX (281) 240-4200 Dallas, TX (214) 502-0300 San Antonio, TX (210) 509-3334

Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1299 Carrollton, TX (432) 704-5440
Phoenix, AZ (480) 365-0300 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 695-6701

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Project Manager:	CLAIR CONZALES	Bill to: (if different)	
Company Name:	TETRA TECH	Company Name:	
Address:	901 W. WALL ST.	Address:	
City, State ZIP:	MURKIN, TX 74705	City, State ZIP:	CLAIR CONZALES @ tetra-tech.com
Phone:		Email:	

Project Name:	P.W.S. DOGSITE SWD	Turn Around	
Project Number:	PENDING	Routine	<input checked="" type="checkbox"/>
Project Location:	Eddy Co, NM	Rush:	
Sampler's Name:	CONNER MEHEM	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT		Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	0.0	Thermometer ID:	T-NM-007		
Received Inlet:	Yes No	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes No	Total Containers:	27		
Sample Custody Seals:	Yes No				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes
	BOREHOLE #22 (0-1)	Soil	10/25/15			1	Chlorides	MeOH: Me
	(2-3)					1	BTX	None: NO
	(4-5)					1	TPH 0.015 M	HNO3: HN
	(6-7)					1		H2SO4: H2
	(8-10)					1		HCL: HL
	(11-13)					1		NaOH: NA
	(14-20)					1		Zn Acetate + NaOH: Zn
	(21-25)					1		
	(26-30)					1		
	BOREHOLE #23 (0-1)					1		

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

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
<i>Conner Mehem</i>	<i>Clair Conzales</i>	10/25/15 1440			



Chain of Custody

Work Order No: 041244

Houston, TX (281) 240-4200 Dallas, TX (214) 802-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1286 Carrollton, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8900 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 569-6701

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Project Manager:	CLAIRE CONZALES	Bill to: (if different)	
Company Name:	TERRATECH	Company Name:	
Address:	901 W. WALL ST.	Address:	
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	
Phone:		Email:	CLAIRE.CONZALES@TERRATECH.COM

Project Name:	2W'S DOORSTATE SMD	Turn Around	
Project Number:	TRUDIN	Routine	<input checked="" type="checkbox"/>
Project Location:	Eddy Co. NM	Rush:	
Sampler's Name:	CLAUDE MATHIAS	Due Date:	
PO #:		Quote #:	

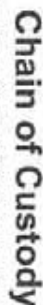
SAMPLE RECEIPT			
Temperature (°C):	Temp Blank:	Yes	No
Received Intact:	Yes	No	
Cooler Custody Seals:	Yes	No	N/A
Sample Custody Seals:	Yes	No	N/A
Total Containers:		Correction Factor:	

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Analysis Request	Preservative Codes	Sample Comments
	BOREHOLE #23 (2-3)	Soil	10/25/14			1	Chlorides		
	(4-5)					1	BTEX		
	(6-7)					1	TPH 0815M		
	(7-10)					1			
	(14-15)					1			
	(15-20)					1			
	(24-25)					1			
	(29-30)					1			
	BOREHOLE #24 (0-1)					1			
	(2-3)					1			

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 A Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SnO2 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. Those terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Claire Conzales</i>	<i>Claire Conzales</i>	10/25/14 1440			



Work Order No: 1041244

www.xenico.com Page 3 of 3

[illegible][illegible]

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xeno, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xeno 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 Xeno. A minimum charge of \$75.00 will be applied to each project and a charge of \$3 for each sample submitted to Xeno, 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
<i>Donna Mayberry</i>	<i>Donna Mayberry</i>	10/25/17 1440			



Inter-Office Shipment

Page 1 of 4

IOS Number **50953**

Date/Time: 10/28/19 13:37

Created by: Elizabeth Mcclellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776834191012

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
641244-001	S	Borehole #22 (0-1')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-001	S	Borehole #22 (0-1')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-001	S	Borehole #22 (0-1')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-002	S	Borehole #22 (2-3')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-002	S	Borehole #22 (2-3')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-002	S	Borehole #22 (2-3')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-003	S	Borehole #22 (4-5')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-003	S	Borehole #22 (4-5')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-003	S	Borehole #22 (4-5')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-004	S	Borehole #22 (6-7')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-004	S	Borehole #22 (6-7')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-004	S	Borehole #22 (6-7')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-005	S	Borehole #22 (9-10')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-005	S	Borehole #22 (9-10')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-005	S	Borehole #22 (9-10')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-006	S	Borehole #22 (14-15')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-006	S	Borehole #22 (14-15')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-006	S	Borehole #22 (14-15')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-007	S	Borehole #22 (19-20')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-007	S	Borehole #22 (19-20')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-007	S	Borehole #22 (19-20')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-008	S	Borehole #22 (24-25')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-008	S	Borehole #22 (24-25')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-008	S	Borehole #22 (24-25')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-009	S	Borehole #22 (29-30')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	



Inter-Office Shipment

Page 2 of 4

IOS Number **50953**

Date/Time: 10/28/19 13:37

Created by: Elizabeth Mcclellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776834191012

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
641244-009	S	Borehole #22 (29-30')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-009	S	Borehole #22 (29-30')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-010	S	Borehole #23 (0-1')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-010	S	Borehole #23 (0-1')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-010	S	Borehole #23 (0-1')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-011	S	Borehole #23 (2-3')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-011	S	Borehole #23 (2-3')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-011	S	Borehole #23 (2-3')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-012	S	Borehole #23 (4-5')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-012	S	Borehole #23 (4-5')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-012	S	Borehole #23 (4-5')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-013	S	Borehole #23 (6-7')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-013	S	Borehole #23 (6-7')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-013	S	Borehole #23 (6-7')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-014	S	Borehole #23 (9-10')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-014	S	Borehole #23 (9-10')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-014	S	Borehole #23 (9-10')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-015	S	Borehole #23 (14-15')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-015	S	Borehole #23 (14-15')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-015	S	Borehole #23 (14-15')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-016	S	Borehole #23 (19-20')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-016	S	Borehole #23 (19-20')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-016	S	Borehole #23 (19-20')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-017	S	Borehole #23 (24-25')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-017	S	Borehole #23 (24-25')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

Page 3 of 4

IOS Number **50953**

Date/Time: 10/28/19 13:37

Created by: Elizabeth Mcclellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776834191012

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
641244-017	S	Borehole #23 (24-25')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-018	S	Borehole #23 (29-30')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-018	S	Borehole #23 (29-30')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-018	S	Borehole #23 (29-30')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-019	S	Borehole #24 (0-1')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-019	S	Borehole #24 (0-1')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-019	S	Borehole #24 (0-1')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-020	S	Borehole #24 (2-3')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-020	S	Borehole #24 (2-3')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-020	S	Borehole #24 (2-3')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-021	S	Borehole #24 (4-5')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-021	S	Borehole #24 (4-5')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-021	S	Borehole #24 (4-5')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-022	S	Borehole #24 (6-7')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-022	S	Borehole #24 (6-7')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-022	S	Borehole #24 (6-7')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-023	S	Borehole #24 (9-10')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-023	S	Borehole #24 (9-10')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-023	S	Borehole #24 (9-10')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-024	S	Borehole #24 (14-15')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-024	S	Borehole #24 (14-15')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-024	S	Borehole #24 (14-15')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-025	S	Borehole #24 (19-20')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-025	S	Borehole #24 (19-20')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-025	S	Borehole #24 (19-20')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:



Inter-Office Shipment

Page 4 of 4

IOS Number **50953**

Date/Time: 10/28/19 13:37

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776834191012

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
641244-026	S	Borehole #24 (24-25')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-026	S	Borehole #24 (24-25')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	
641244-026	S	Borehole #24 (24-25')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-027	S	Borehole #24 (29-30')	10/25/19 00:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/08/19	JKR	BR4FBZ BZ BZME EBZ X	
641244-027	S	Borehole #24 (29-30')	10/25/19 00:00	E300	Inorganic Anions by EPA 300/300.1	10/31/19	11/22/19	JKR	CL	
641244-027	S	Borehole #24 (29-30')	10/25/19 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10/31/19	11/08/19	JKR	PHCC10C28 PHCC28C35 I	

Inter Office Shipment or Sample Comments:

Date Relinquished:

Elizabeth McClellan

10/28/2019

Date Received:

Cooler Temperature:

Brianna Teel

10/29/2019 11:04

0.3



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 50953

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Elizabeth McClellan

Date Sent: 10/28/2019 01:37 PM

Received By: Brianna Teel

Date Received: 10/29/2019 11:04 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Brianna Teel

Date: 10/29/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Tetra Tech- Midland

Date/ Time Received: 10/25/2019 02:40:00 PM

Work Order #: 641244

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.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)?	Yes Subbed to Midland.
#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:

Elizabeth McClellan

Date: 10/28/2019

Checklist reviewed by:

Jessica Kramer

Date: 10/29/2019

Analytical Report 641434

for
Tetra Tech- Midland

Project Manager: Clair Gonzales

Permian Water Solutions Dorstate SWD Addiional Assessment

06-NOV-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



06-NOV-19

Project Manager: **Clair Gonzales**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **641434**

Permian Water Solutions Dorstate SWD Addiional Assessment

Project Address: Eddy County, NM

Clair Gonzales:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 641434. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 641434 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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Sample Cross Reference 641434



Tetra Tech- Midland, Midland, TX

Permian Water Solutions Dorstate SWD Addiional Assessment

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
H1 0-1	S	10-23-19 00:00		641434-001
H1 1-2	S	10-23-19 00:00		641434-002
H2 0-1	S	10-23-19 00:00		641434-003
H2 1-2	S	10-23-19 00:00		641434-004
H3 0-1	S	10-23-19 00:00		641434-005
H3 1-2	S	10-23-19 00:00		641434-006
H4 0-1	S	10-23-19 00:00		641434-007
H4 1-2	S	10-23-19 00:00		641434-008
H5 0-1	S	10-23-19 00:00		641434-009
H5 1-2	S	10-23-19 00:00		641434-010
H6 0-1	S	10-23-19 00:00		641434-011
H6 1-2	S	10-23-19 00:00		641434-012
H7 0-1	S	10-23-19 00:00		641434-013
H7 1-2	S	10-23-19 00:00		641434-014
H8 0-1	S	10-23-19 00:00		641434-015
H8 1-2	S	10-23-19 00:00		641434-016
H9 0-8"	S	10-24-19 00:00		641434-017
H10 0-1	S	10-24-19 00:00		641434-018
H10 1-2	S	10-24-19 00:00		641434-019
H11 0-10"	S	10-24-19 00:00		641434-020
H12 0-1	S	10-24-19 00:00		641434-021
H12 1-2	S	10-24-19 00:00		641434-022
H13 0-1	S	10-24-19 00:00		641434-023
H14 0-1	S	10-24-19 00:00		641434-024
H14 1-2	S	10-24-19 00:00		641434-025
H15 0-1	S	10-24-19 00:00		641434-026
H15 1-2	S	10-24-19 00:00		641434-027
H16 0-1	S	10-24-19 00:00		641434-028
H16 1-2	S	10-24-19 00:00		641434-029
H17 0-1	S	10-25-19 00:00		641434-030
H17 1-2	S	10-25-19 00:00		641434-031
H18 0-1	S	10-25-19 00:00		641434-032
H18 1-2	S	10-25-19 00:00		641434-033
H19 0-1	S	10-25-19 00:00		641434-034
H19 1-2	S	10-25-19 00:00		641434-035
H20 0-1	S	10-25-19 00:00		641434-036
H20 1-2	S	10-25-19 00:00		641434-037

**CASE NARRATIVE****Client Name: Tetra Tech- Midland****Project Name: Permian Water Solutions Dorstate SWD Addiional Assessment**

Project ID:

Work Order Number(s): 641434

Report Date: 06-NOV-19

Date Received: 10/29/2019

Sample receipt non conformances and comments:None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3106096 Inorganic Anions by EPA 300/300.1

Lab Sample ID 641447-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 641434-036, -037.

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

Batch: LBA-3106497 BTEX by EPA 8021B

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

Surrogate 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 641434-034.

Batch: LBA-3106504 BTEX by EPA 8021B

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

Batch: LBA-3106580 BTEX by EPA 8021B

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



Certificate of Analysis Summary 641434

Tetra Tech- Midland, Midland, TX



Project Name: Permian Water Solutions Dorstate SWD Additional Assessment

Project Id:

Date Received in Lab: Tue Oct-29-19 03:45 pm

Contact: Clair Gonzales

Report Date: 06-NOV-19

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641434-001	641434-002	641434-003	641434-004	641434-005	641434-006
	<i>Field Id:</i>	H1 0-1	H1 1-2	H2 0-1	H2 1-2	H3 0-1	H3 1-2
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00
	<i>Analyzed:</i>	Nov-04-19 14:25	Nov-04-19 14:45	Nov-04-19 15:05	Nov-04-19 15:25	Nov-04-19 15:45	Nov-04-19 16:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
m,p-Xylenes		<0.00404 0.00404	<0.00400 0.00400	<0.00397 0.00397	<0.00399 0.00399	<0.00398 0.00398	<0.00398 0.00398
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Oct-30-19 10:45	Oct-30-19 10:45	Oct-30-19 10:45	Oct-30-19 16:35	Oct-30-19 16:35	Oct-30-19 16:35
	<i>Analyzed:</i>	Oct-30-19 13:52	Oct-30-19 13:59	Oct-30-19 14:05	Oct-30-19 20:33	Oct-30-19 20:40	Oct-30-19 20:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		322 4.97	325 5.05	148 5.00	275 5.04	135 5.05	148 4.96
TPH By SW8015 Mod	<i>Extracted:</i>	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00
	<i>Analyzed:</i>	Nov-01-19 21:58	Nov-01-19 23:00	Nov-01-19 23:21	Nov-01-19 23:42	Nov-02-19 00:04	Nov-02-19 00:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	169 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Total TPH		<50.0 50.0	<49.8 49.8	169 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0

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

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Version: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641434

Tetra Tech- Midland, Midland, TX



Project Name: Permian Water Solutions Dorstate SWD Additional Assessment

Project Id:

Date Received in Lab: Tue Oct-29-19 03:45 pm

Contact: Clair Gonzales

Report Date: 06-NOV-19

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641434-007	641434-008	641434-009	641434-010	641434-011	641434-012
	<i>Field Id:</i>	H4 0-1	H4 1-2	H5 0-1	H5 1-2	H6 0-1	H6 1-2
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00
	<i>Analyzed:</i>	Nov-04-19 16:26	Nov-04-19 16:46	Nov-04-19 17:06	Nov-04-19 18:24	Nov-04-19 18:44	Nov-04-19 19:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00402 0.00402	<0.00401 0.00401	<0.00396 0.00396	<0.00399 0.00399	<0.00400 0.00400
o-Xylene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Oct-30-19 16:35	Oct-30-19 16:35	Oct-30-19 16:35	Oct-30-19 16:35	Oct-30-19 16:35	Oct-30-19 16:35
	<i>Analyzed:</i>	Oct-30-19 21:07	Oct-30-19 21:13	Oct-30-19 21:33	Oct-30-19 21:40	Oct-30-19 21:46	Oct-30-19 21:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		641 25.0	259 25.1	452 24.9	492 50.4	439 49.6	516 50.0
TPH By SW8015 Mod	<i>Extracted:</i>	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00
	<i>Analyzed:</i>	Nov-02-19 00:46	Nov-02-19 01:07	Nov-02-19 01:28	Nov-02-19 01:48	Nov-02-19 02:30	Nov-02-19 02:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641434

Tetra Tech- Midland, Midland, TX



Project Name: Permian Water Solutions Dorstate SWD Additional Assessment

Project Id:

Date Received in Lab: Tue Oct-29-19 03:45 pm

Contact: Clair Gonzales

Report Date: 06-NOV-19

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641434-013	641434-014	641434-015	641434-016	641434-017	641434-018
	<i>Field Id:</i>	H7 0-1	H7 1-2	H8 0-1	H8 1-2	H9 0-8"	H10 0-1
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00	Oct-23-19 00:00	Oct-24-19 00:00	Oct-24-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00	Nov-04-19 11:00
	<i>Analyzed:</i>	Nov-04-19 19:24	Nov-04-19 19:45	Nov-04-19 20:05	Nov-04-19 20:25	Nov-04-19 20:45	Nov-04-19 21:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
Toluene		<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
m,p-Xylenes		<0.00403 0.00403	<0.00402 0.00402	<0.00402 0.00402	<0.00400 0.00400	<0.00397 0.00397	<0.00398 0.00398
o-Xylene		<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
Total BTEX		<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Oct-30-19 16:35	Oct-30-19 16:35	Oct-30-19 16:35	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05
	<i>Analyzed:</i>	Oct-30-19 22:00	Oct-30-19 22:06	Oct-30-19 22:13	Oct-31-19 08:48	Oct-31-19 09:15	Oct-31-19 09:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		243 4.96	175 5.03	281 4.99	855 4.98	154 5.04	192 4.96
TPH By SW8015 Mod	<i>Extracted:</i>	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00	Nov-01-19 13:00
	<i>Analyzed:</i>	Nov-02-19 03:13	Nov-02-19 03:34	Nov-02-19 03:55	Nov-02-19 04:16	Nov-02-19 04:37	Nov-02-19 04:58
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0

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

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Version: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641434

Tetra Tech- Midland, Midland, TX



Project Name: Permian Water Solutions Dorstate SWD Additional Assessment

Project Id:

Date Received in Lab: Tue Oct-29-19 03:45 pm

Contact: Clair Gonzales

Report Date: 06-NOV-19

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641434-019	641434-020	641434-021	641434-022	641434-023	641434-024
	<i>Field Id:</i>	H10 1-2	H11 0-10"	H12 0-1	H12 1-2	H13 0-1	H14 0-1
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-24-19 00:00	Oct-24-19 00:00	Oct-24-19 00:00	Oct-24-19 00:00	Oct-24-19 00:00	Oct-24-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-04-19 11:00	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00
	<i>Analyzed:</i>	Nov-04-19 21:25	Nov-05-19 01:03	Nov-05-19 01:23	Nov-05-19 08:59	Nov-05-19 09:19	Nov-05-19 09:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Ethylbenzene		<0.00200 0.00200	0.00498 0.00199	0.00440 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
m,p-Xylenes		<0.00400 0.00400	0.00681 0.00398	0.00571 0.00399	<0.00402 0.00402	<0.00403 0.00403	<0.00397 0.00397
o-Xylene		<0.00200 0.00200	0.00233 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Total Xylenes		<0.00200 0.00200	0.00914 0.00199	0.00571 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Total BTEX		<0.00200 0.00200	0.0141 0.00199	0.0101 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00198 0.00198
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05
	<i>Analyzed:</i>	Oct-31-19 09:25	Oct-31-19 09:31	Oct-31-19 09:46	Oct-31-19 09:51	Oct-31-19 09:56	Oct-31-19 10:01
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		72.7 5.00	125 4.99	57.4 5.03	174 4.95	332 4.95	32.0 4.95
TPH By SW8015 Mod	<i>Extracted:</i>	Nov-01-19 13:00	Nov-01-19 13:00	Oct-31-19 10:00	Oct-31-19 10:00	Oct-31-19 10:00	Oct-31-19 10:00
	<i>Analyzed:</i>	Nov-02-19 05:19	Nov-02-19 05:40	Oct-31-19 13:09	Oct-31-19 14:05	Oct-31-19 14:24	Oct-31-19 14:43
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	141 50.0	<49.9 49.9	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9
Total TPH		<49.9 49.9	<50.0 50.0	<50.0 50.0	141 50.0	<49.9 49.9	<49.9 49.9

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Version: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641434

Tetra Tech- Midland, Midland, TX



Project Name: Permian Water Solutions Dorstate SWD Additional Assessment

Project Id:

Date Received in Lab: Tue Oct-29-19 03:45 pm

Contact: Clair Gonzales

Report Date: 06-NOV-19

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641434-025	641434-026	641434-027	641434-028	641434-029	641434-030
	<i>Field Id:</i>	H14 1-2	H15 0-1	H15 1-2	H16 0-1	H16 1-2	H17 0-1
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-24-19 00:00	Oct-24-19 00:00	Oct-24-19 00:00	Oct-24-19 00:00	Oct-24-19 00:00	Oct-25-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00
	<i>Analyzed:</i>	Nov-05-19 09:59	Nov-05-19 10:19	Nov-05-19 10:39	Nov-05-19 11:00	Nov-05-19 12:38	Nov-05-19 12:58
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00398 0.00398	<0.00396 0.00396	<0.00403 0.00403	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05
	<i>Analyzed:</i>	Oct-31-19 10:07	Oct-31-19 10:12	Oct-31-19 10:27	Oct-31-19 10:32	Oct-31-19 10:48	Oct-31-19 10:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		25.8 5.02	6.18 4.99	31.9 4.97	22.7 5.00	307 5.00	38.3 5.04
TPH By SW8015 Mod	<i>Extracted:</i>	Oct-31-19 10:00	Oct-31-19 10:00	Oct-31-19 10:00	Oct-31-19 10:00	Oct-31-19 10:00	Oct-31-19 10:00
	<i>Analyzed:</i>	Oct-31-19 15:02	Oct-31-19 15:20	Oct-31-19 15:39	Oct-31-19 15:58	Oct-31-19 16:17	Oct-31-19 16:35
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<49.9 49.9
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<49.9 49.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641434

Tetra Tech- Midland, Midland, TX



Project Name: Permian Water Solutions Dorstate SWD Additional Assessment

Project Id:

Date Received in Lab: Tue Oct-29-19 03:45 pm

Contact: Clair Gonzales

Report Date: 06-NOV-19

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641434-031	641434-032	641434-033	641434-034	641434-035	641434-036
	<i>Field Id:</i>	H17 1-2	H18 0-1	H18 1-2	H19 0-1	H19 1-2	H20 0-1
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00	Oct-25-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00	Nov-04-19 16:00
	<i>Analyzed:</i>	Nov-05-19 13:18	Nov-05-19 13:38	Nov-05-19 13:59	Nov-05-19 16:35	Nov-05-19 16:56	Nov-05-19 17:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Toluene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Ethylbenzene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
m,p-Xylenes		<0.00404 0.00404	<0.00397 0.00397	<0.00397 0.00397	<0.00398 0.00398	<0.00397 0.00397	<0.00403 0.00403
o-Xylene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Total Xylenes		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Total BTEX		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:05	Oct-31-19 08:15
	<i>Analyzed:</i>	Oct-31-19 10:58	Oct-31-19 11:03	Oct-31-19 11:08	Oct-31-19 11:13	Oct-31-19 11:18	Oct-31-19 09:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		58.5 5.01	59.2 4.96	117 4.98	140 5.00	847 25.2	435 5.00
TPH By SW8015 Mod	<i>Extracted:</i>	Oct-31-19 10:00	Oct-31-19 10:00	Oct-31-19 12:00	Oct-31-19 12:00	Oct-31-19 12:00	Oct-31-19 12:00
	<i>Analyzed:</i>	Oct-31-19 17:13	Oct-31-19 17:32	Nov-01-19 03:19	Nov-01-19 03:38	Nov-01-19 03:57	Nov-01-19 04:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641434

Tetra Tech- Midland, Midland, TX



Project Name: Permian Water Solutions Dorstate SWD Additional Assessment

Project Id:

Date Received in Lab: Tue Oct-29-19 03:45 pm

Contact: Clair Gonzales

Report Date: 06-NOV-19

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	641434-037					
	Field Id:	H20 1-2					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Oct-25-19 00:00					
BTEX by EPA 8021B	Extracted:	Nov-05-19 16:15					
	Analyzed:	Nov-05-19 21:58					
	Units/RL:	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00401 0.00401					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-31-19 08:15					
	Analyzed:	Oct-31-19 09:48					
	Units/RL:	mg/kg RL					
Chloride		126 4.96					
TPH By SW8015 Mod	Extracted:	Oct-31-19 12:00					
	Analyzed:	Nov-01-19 04:35					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0					
Diesel Range Organics (DRO)		<50.0 50.0					
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0					
Total TPH		<50.0 50.0					

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Jessica Kramer

Jessica Kramer
Project Assistant



Flagging Criteria



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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106136

Sample: 641434-021 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 13:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.4	99.9	84	70-135	
o-Terphenyl	43.7	50.0	87	70-135	

Lab Batch #: 3106136

Sample: 641434-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 14:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.8	99.9	83	70-135	
o-Terphenyl	42.9	50.0	86	70-135	

Lab Batch #: 3106136

Sample: 641434-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 14:24

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.6	99.7	88	70-135	
o-Terphenyl	42.0	49.9	84	70-135	

Lab Batch #: 3106136

Sample: 641434-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 14:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.1	99.8	81	70-135	
o-Terphenyl	42.3	49.9	85	70-135	

Lab Batch #: 3106136

Sample: 641434-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 15:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.9	99.9	83	70-135	
o-Terphenyl	42.9	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106136

Sample: 641434-026 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 15:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.8	100	80	70-135	
o-Terphenyl	41.7	50.0	83	70-135	

Lab Batch #: 3106136

Sample: 641434-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 15:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.8	99.7	79	70-135	
o-Terphenyl	41.2	49.9	83	70-135	

Lab Batch #: 3106136

Sample: 641434-028 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 15:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.0	99.9	82	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 3106136

Sample: 641434-029 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 16:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.3	99.6	82	70-135	
o-Terphenyl	41.6	49.8	84	70-135	

Lab Batch #: 3106136

Sample: 641434-030 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 16:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.0	99.7	82	70-135	
o-Terphenyl	41.9	49.9	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106136

Sample: 641434-031 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 17:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.6	99.8	82	70-135	
o-Terphenyl	41.9	49.9	84	70-135	

Lab Batch #: 3106136

Sample: 641434-032 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 17:32

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.2	100	78	70-135	
o-Terphenyl	40.2	50.0	80	70-135	

Lab Batch #: 3106137

Sample: 641434-033 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 03:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.4	99.9	78	70-135	
o-Terphenyl	39.6	50.0	79	70-135	

Lab Batch #: 3106137

Sample: 641434-034 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 03:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.0	100	82	70-135	
o-Terphenyl	41.6	50.0	83	70-135	

Lab Batch #: 3106137

Sample: 641434-035 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 03:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.9	99.8	80	70-135	
o-Terphenyl	40.8	49.9	82	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106137

Sample: 641434-036 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 04:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.6	99.9	81	70-135	
o-Terphenyl	41.8	50.0	84	70-135	

Lab Batch #: 3106137

Sample: 641434-037 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 04:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.3	100	80	70-135	
o-Terphenyl	41.4	50.0	83	70-135	

Lab Batch #: 3106228

Sample: 641434-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 21:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.0	99.9	78	70-135	
o-Terphenyl	40.3	50.0	81	70-135	

Lab Batch #: 3106228

Sample: 641434-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 23:00

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.6	99.6	81	70-135	
o-Terphenyl	41.3	49.8	83	70-135	

Lab Batch #: 3106228

Sample: 641434-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 23:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.2	99.9	80	70-135	
o-Terphenyl	42.6	50.0	85	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106228

Sample: 641434-004 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 23:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.3	99.8	76	70-135	
o-Terphenyl	39.3	49.9	79	70-135	

Lab Batch #: 3106228

Sample: 641434-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 00:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.9	99.7	86	70-135	
o-Terphenyl	45.9	49.9	92	70-135	

Lab Batch #: 3106228

Sample: 641434-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 00:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.1	99.9	90	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 3106228

Sample: 641434-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 00:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.7	100	91	70-135	
o-Terphenyl	48.0	50.0	96	70-135	

Lab Batch #: 3106228

Sample: 641434-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 01:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.1	99.7	94	70-135	
o-Terphenyl	48.6	49.9	97	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106228

Sample: 641434-009 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 01:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.9	99.8	77	70-135	
o-Terphenyl	40.2	49.9	81	70-135	

Lab Batch #: 3106228

Sample: 641434-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 01:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.8	99.9	78	70-135	
o-Terphenyl	39.3	50.0	79	70-135	

Lab Batch #: 3106228

Sample: 641434-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 02:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.8	100	76	70-135	
o-Terphenyl	37.8	50.0	76	70-135	

Lab Batch #: 3106228

Sample: 641434-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 02:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.4	99.8	82	70-135	
o-Terphenyl	42.7	49.9	86	70-135	

Lab Batch #: 3106228

Sample: 641434-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 03:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.2	99.9	78	70-135	
o-Terphenyl	39.7	50.0	79	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106228

Sample: 641434-014 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 03:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.4	99.7	87	70-135	
o-Terphenyl	46.0	49.9	92	70-135	

Lab Batch #: 3106228

Sample: 641434-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 03:55

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.3	100	89	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 3106228

Sample: 641434-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 04:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.4	99.9	88	70-135	
o-Terphenyl	47.4	50.0	95	70-135	

Lab Batch #: 3106228

Sample: 641434-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 04:37

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.0	99.8	86	70-135	
o-Terphenyl	46.1	49.9	92	70-135	

Lab Batch #: 3106228

Sample: 641434-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 04:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.3	99.9	78	70-135	
o-Terphenyl	39.8	50.0	80	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106228

Sample: 641434-019 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 05:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	99.7	83	70-135	
o-Terphenyl	44.9	49.9	90	70-135	

Lab Batch #: 3106228

Sample: 641434-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/19 05:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.8	99.9	84	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 3106504

Sample: 641434-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 14:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0303	0.0300	101	70-130	

Lab Batch #: 3106504

Sample: 641434-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 14:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0300	0.0300	100	70-130	

Lab Batch #: 3106504

Sample: 641434-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 15:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0306	0.0300	102	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106504

Sample: 641434-004 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 15:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0321	0.0300	107	70-130	

Lab Batch #: 3106504

Sample: 641434-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 15:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	70-130	
4-Bromofluorobenzene	0.0325	0.0300	108	70-130	

Lab Batch #: 3106504

Sample: 641434-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 16:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	70-130	
4-Bromofluorobenzene	0.0327	0.0300	109	70-130	

Lab Batch #: 3106504

Sample: 641434-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 16:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0317	0.0300	106	70-130	

Lab Batch #: 3106504

Sample: 641434-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 16:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0323	0.0300	108	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106504

Sample: 641434-009 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 17:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	70-130	
4-Bromofluorobenzene	0.0323	0.0300	108	70-130	

Lab Batch #: 3106504

Sample: 641434-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 18:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	70-130	
4-Bromofluorobenzene	0.0306	0.0300	102	70-130	

Lab Batch #: 3106504

Sample: 641434-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 18:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	70-130	
4-Bromofluorobenzene	0.0345	0.0300	115	70-130	

Lab Batch #: 3106504

Sample: 641434-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 19:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0337	0.0300	112	70-130	

Lab Batch #: 3106504

Sample: 641434-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 19:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0354	0.0300	118	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106504

Sample: 641434-014 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 19:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	70-130	
4-Bromofluorobenzene	0.0348	0.0300	116	70-130	

Lab Batch #: 3106504

Sample: 641434-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 20:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	70-130	
4-Bromofluorobenzene	0.0338	0.0300	113	70-130	

Lab Batch #: 3106504

Sample: 641434-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 20:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	70-130	
4-Bromofluorobenzene	0.0366	0.0300	122	70-130	

Lab Batch #: 3106504

Sample: 641434-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 20:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	70-130	
4-Bromofluorobenzene	0.0358	0.0300	119	70-130	

Lab Batch #: 3106504

Sample: 641434-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 21:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106504

Sample: 641434-019 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 21:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0327	0.0300	109	70-130	

Lab Batch #: 3106497

Sample: 641434-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 01:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	70-130	
4-Bromofluorobenzene	0.0330	0.0300	110	70-130	

Lab Batch #: 3106497

Sample: 641434-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 01:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0215	0.0300	72	70-130	
4-Bromofluorobenzene	0.0326	0.0300	109	70-130	

Lab Batch #: 3106497

Sample: 641434-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 08:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	70-130	
4-Bromofluorobenzene	0.0328	0.0300	109	70-130	

Lab Batch #: 3106497

Sample: 641434-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 09:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0329	0.0300	110	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106497

Sample: 641434-024 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 09:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	70-130	
4-Bromofluorobenzene	0.0305	0.0300	102	70-130	

Lab Batch #: 3106497

Sample: 641434-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 09:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	70-130	
4-Bromofluorobenzene	0.0320	0.0300	107	70-130	

Lab Batch #: 3106497

Sample: 641434-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 10:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0319	0.0300	106	70-130	

Lab Batch #: 3106497

Sample: 641434-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 10:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0309	0.0300	103	70-130	

Lab Batch #: 3106497

Sample: 641434-028 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 11:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106497

Sample: 641434-029 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 12:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	70-130	
4-Bromofluorobenzene	0.0376	0.0300	125	70-130	

Lab Batch #: 3106497

Sample: 641434-030 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 12:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0326	0.0300	109	70-130	

Lab Batch #: 3106497

Sample: 641434-031 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 13:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0328	0.0300	109	70-130	

Lab Batch #: 3106497

Sample: 641434-032 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 13:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0235	0.0300	78	70-130	
4-Bromofluorobenzene	0.0351	0.0300	117	70-130	

Lab Batch #: 3106497

Sample: 641434-033 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 13:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	70-130	
4-Bromofluorobenzene	0.0325	0.0300	108	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106497

Sample: 641434-034 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 16:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0208	0.0300	69	70-130	**
4-Bromofluorobenzene	0.0336	0.0300	112	70-130	

Lab Batch #: 3106497

Sample: 641434-035 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 16:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	70-130	
4-Bromofluorobenzene	0.0296	0.0300	99	70-130	

Lab Batch #: 3106497

Sample: 641434-036 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 17:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	70-130	
4-Bromofluorobenzene	0.0320	0.0300	107	70-130	

Lab Batch #: 3106580

Sample: 641434-037 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 21:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	70-130	
4-Bromofluorobenzene	0.0287	0.0300	96	70-130	

Lab Batch #: 3106136

Sample: 7689297-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/19 12:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.5	100	90	70-135	
o-Terphenyl	44.4	50.0	89	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106137

Sample: 7689298-1-BLK / BLK

Project ID:

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/19 20:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	100	91	70-135	
o-Terphenyl	45.1	50.0	90	70-135	

Lab Batch #: 3106228

Sample: 7689413-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/01/19 20:55

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	45.4	50.0	91	70-135	

Lab Batch #: 3106504

Sample: 7689578-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/04/19 13:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	70-130	
4-Bromofluorobenzene	0.0293	0.0300	98	70-130	

Lab Batch #: 3106497

Sample: 7689579-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/05/19 00:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	70-130	
4-Bromofluorobenzene	0.0291	0.0300	97	70-130	

Lab Batch #: 3106580

Sample: 7689675-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/05/19 21:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0290	0.0300	97	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106136

Sample: 7689297-1-BKS / BKS

Project ID:

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/19 12:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	46.9	50.0	94	70-135	

Lab Batch #: 3106137

Sample: 7689298-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/19 20:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 3106228

Sample: 7689413-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/01/19 21:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	53.5	50.0	107	70-135	

Lab Batch #: 3106504

Sample: 7689578-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/04/19 12:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	70-130	
4-Bromofluorobenzene	0.0322	0.0300	107	70-130	

Lab Batch #: 3106497

Sample: 7689579-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/04/19 22:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0345	0.0300	115	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106580

Sample: 7689675-1-BKS / BKS

Project ID:

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/05/19 19:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0307	0.0300	102	70-130	

Lab Batch #: 3106136

Sample: 7689297-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/19 12:50

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 3106137

Sample: 7689298-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/19 21:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 3106228

Sample: 7689413-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/01/19 21:37

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	55.9	50.0	112	70-135	

Lab Batch #: 3106504

Sample: 7689578-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/04/19 12:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	70-130	
4-Bromofluorobenzene	0.0321	0.0300	107	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106497

Sample: 7689579-1-BSD / BSD

Project ID:

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/04/19 23:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	70-130	
4-Bromofluorobenzene	0.0295	0.0300	98	70-130	

Lab Batch #: 3106580

Sample: 7689675-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/05/19 20:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

Lab Batch #: 3106136

Sample: 641434-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 13:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.7	108	70-135	
o-Terphenyl	47.1	49.9	94	70-135	

Lab Batch #: 3106137

Sample: 641367-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 21:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	99.7	126	70-135	
o-Terphenyl	55.6	49.9	111	70-135	

Lab Batch #: 3106228

Sample: 641434-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 22:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.3	99.7	94	70-135	
o-Terphenyl	45.2	49.9	91	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106504

Sample: 641371-001 S / MS

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 12:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	70-130	
4-Bromofluorobenzene	0.0336	0.0300	112	70-130	

Lab Batch #: 3106497

Sample: 641434-020 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 23:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0344	0.0300	115	70-130	

Lab Batch #: 3106580

Sample: 641654-006 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 20:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0330	0.0300	110	70-130	

Lab Batch #: 3106136

Sample: 641434-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 13:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.8	111	70-135	
o-Terphenyl	47.8	49.9	96	70-135	

Lab Batch #: 3106137

Sample: 641367-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/19 22:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.8	127	70-135	
o-Terphenyl	55.5	49.9	111	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: Permian Water Solutions Dorstate SWD Addiional Assessn

Work Orders : 641434,

Lab Batch #: 3106228

Sample: 641434-001 SD / MSD

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/19 22:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.9	99.9	94	70-135	
o-Terphenyl	46.7	50.0	93	70-135	

Lab Batch #: 3106504

Sample: 641371-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 13:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	70-130	
4-Bromofluorobenzene	0.0332	0.0300	111	70-130	

Lab Batch #: 3106497

Sample: 641434-020 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/19 23:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	70-130	
4-Bromofluorobenzene	0.0332	0.0300	111	70-130	

Lab Batch #: 3106580

Sample: 641654-006 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/19 20:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	70-130	
4-Bromofluorobenzene	0.0349	0.0300	116	70-130	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



BS / BSD Recoveries



Project Name: Permian Water Solutions Dorstate SWD Addiional Assessment

Work Order #: 641434

Analyst: KTL

Date Prepared: 11/04/2019

Project ID:

Date Analyzed: 11/04/2019

Lab Batch ID: 3106504

Sample: 7689578-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00200	0.100	0.0985	99	0.100	0.103	103	4	70-130	35	
Toluene	<0.00200	0.100	0.0992	99	0.100	0.104	104	5	70-130	35	
Ethylbenzene	<0.00200	0.100	0.104	104	0.100	0.109	109	5	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.200	0.222	111	4	70-130	35	
o-Xylene	<0.00200	0.100	0.106	106	0.100	0.110	110	4	70-130	35	

Analyst: KTL

Date Prepared: 11/04/2019

Date Analyzed: 11/04/2019

Lab Batch ID: 3106497

Sample: 7689579-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00200	0.100	0.0907	91	0.100	0.100	100	10	70-130	35	
Toluene	<0.00200	0.100	0.0965	97	0.100	0.0957	96	1	70-130	35	
Ethylbenzene	<0.00200	0.100	0.105	105	0.100	0.0958	96	9	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.218	109	0.200	0.193	97	12	70-130	35	
o-Xylene	<0.00200	0.100	0.110	110	0.100	0.0974	97	12	70-130	35	

Relative Percent Difference RPD = $200 * [(C-F)/(C+F)]$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Version: 1.0%



BS / BSD Recoveries



Project Name: Permian Water Solutions Dorstate SWD Addiional Assessment

Work Order #: 641434

Project ID:

Analyst: KTL

Date Prepared: 11/05/2019

Date Analyzed: 11/05/2019

Lab Batch ID: 3106580

Sample: 7689675-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00200	0.100	0.101	101	0.100	0.0960	96	5	70-130	35	
Toluene	<0.00200	0.100	0.0978	98	0.100	0.0908	91	7	70-130	35	
Ethylbenzene	<0.00200	0.100	0.100	100	0.100	0.0921	92	8	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.200	0.188	94	8	70-130	35	
o-Xylene	<0.00200	0.100	0.101	101	0.100	0.0944	94	7	70-130	35	

Analyst: CHE

Date Prepared: 10/30/2019

Date Analyzed: 10/30/2019

Lab Batch ID: 3105919

Sample: 7689209-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	253	101	250	251	100	1	90-110	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Version: 1.0%



BS / BSD Recoveries



Project Name: Permian Water Solutions Dorstate SWD Addiional Assessment

Work Order #: 641434

Project ID:

Analyst: CHE

Date Prepared: 10/30/2019

Date Analyzed: 10/30/2019

Lab Batch ID: 3105992

Sample: 7689270-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	246	98	250	246	98	0	90-110	20	

Analyst: CHE

Date Prepared: 10/31/2019

Date Analyzed: 10/31/2019

Lab Batch ID: 3106006

Sample: 7689289-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	242	97	250	236	94	3	90-110	20	

Analyst: CHE

Date Prepared: 10/31/2019

Date Analyzed: 10/31/2019

Lab Batch ID: 3106096

Sample: 7689290-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	249	100	250	247	99	1	90-110	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Version: 1.0%



BS / BSD Recoveries



Project Name: Permian Water Solutions Dorstate SWD Addiional Assessment

Work Order #: 641434

Project ID:

Analyst: ARM

Date Prepared: 10/31/2019

Date Analyzed: 10/31/2019

Lab Batch ID: 3106136

Sample: 7689297-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1010	101	1000	1030	103	2	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	984	98	1000	989	99	1	70-135	20	

Analyst: ARM

Date Prepared: 10/31/2019

Date Analyzed: 10/31/2019

Lab Batch ID: 3106137

Sample: 7689298-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1050	105	1000	1040	104	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	1000	1000	100	1	70-135	20	

Analyst: ARM

Date Prepared: 11/01/2019

Date Analyzed: 11/01/2019

Lab Batch ID: 3106228

Sample: 7689413-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	983	98	1000	989	99	1	70-135	20	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	1000	1060	106	1	70-135	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Blank Spike Recovery [D] = 100*(C)/[B]

Blank Spike Duplicate Recovery [G] = 100*(F)/[E]

All results are based on MDL and Validated for QC Purposes

Version: 1.0%



Form 3 - MS / MSD Recoveries



Project Name: Permian Water Solutions Dorstate SWD Addiional Asses.....

Work Order #: 641434

Project ID:

Lab Batch ID: 3106497

QC- Sample ID: 641434-020 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/04/2019

Date Prepared: 11/04/2019

Analyst: KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.00183	0.100	0.0782	76	0.0996	0.0763	75	2	70-130	35	
Toluene	<0.00200	0.100	0.0825	83	0.0996	0.0782	79	5	70-130	35	
Ethylbenzene	0.00498	0.100	0.0902	85	0.0996	0.0861	81	5	70-130	35	
m,p-Xylenes	0.00681	0.200	0.185	89	0.199	0.176	85	5	70-130	35	
o-Xylene	0.00233	0.100	0.0940	92	0.0996	0.0904	88	4	70-130	35	

Lab Batch ID: 3106504

QC- Sample ID: 641371-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/04/2019

Date Prepared: 11/04/2019

Analyst: KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00201	0.100	0.0926	93	0.100	0.0983	98	6	70-130	35	
Toluene	<0.00201	0.100	0.0938	94	0.100	0.0976	98	4	70-130	35	
Ethylbenzene	<0.00201	0.100	0.0986	99	0.100	0.102	102	3	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.202	100	0.201	0.206	102	2	70-130	35	
o-Xylene	<0.00201	0.100	0.101	101	0.100	0.103	103	2	70-130	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: Permian Water Solutions Dorstate SWD Addiional Asses.....

Work Order #: 641434

Project ID:

Lab Batch ID: 3106580

QC- Sample ID: 641654-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/05/2019

Date Prepared: 11/05/2019

Analyst: KTL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00198	0.0990	0.0490	49	0.101	0.0527	52	7	70-130	35	X
Toluene	<0.00198	0.0990	0.0515	52	0.101	0.0561	56	9	70-130	35	X
Ethylbenzene	<0.00198	0.0990	0.0540	55	0.101	0.0592	59	9	70-130	35	X
m,p-Xylenes	<0.00396	0.198	0.109	55	0.202	0.120	59	10	70-130	35	X
o-Xylene	<0.00198	0.0990	0.0523	53	0.101	0.0585	58	11	70-130	35	X

Lab Batch ID: 3105919

QC- Sample ID: 641420-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/30/2019

Date Prepared: 10/30/2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	64.0	250	325	104	250	325	104	0	90-110	20	

Lab Batch ID: 3105919

QC- Sample ID: 641420-011 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/30/2019

Date Prepared: 10/30/2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	67.7	250	330	105	250	332	106	1	90-110	20	

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

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

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



Form 3 - MS / MSD Recoveries



Project Name: Permian Water Solutions Dorstate SWD Addiional Asses.....

Work Order #: 641434
 Lab Batch ID: 3105992
 Date Analyzed: 10/30/2019
 Reporting Units: mg/kg

Project ID:

QC- Sample ID: 641434-006 S Batch #: 1 Matrix: Soil
 Date Prepared: 10/30/2019 Analyst: CHE

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	148	248	376	92	248	378	93	1	90-110	20	

Lab Batch ID: 3105992
 Date Analyzed: 10/30/2019
 Reporting Units: mg/kg

QC- Sample ID: 641506-100 S Batch #: 1 Matrix: Soil
 Date Prepared: 10/30/2019 Analyst: CHE

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	351	250	570	88	250	568	87	0	90-110	20	X

Lab Batch ID: 3106006
 Date Analyzed: 10/31/2019
 Reporting Units: mg/kg

QC- Sample ID: 641434-016 S Batch #: 1 Matrix: Soil
 Date Prepared: 10/31/2019 Analyst: CHE

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	855	199	1070	108	199	1050	98	2	90-110	20	

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

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

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



Form 3 - MS / MSD Recoveries



Project Name: Permian Water Solutions Dorstate SWD Addiional Asses.....

Work Order #: 641434

Project ID:

Lab Batch ID: 3106006

QC- Sample ID: 641434-026 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/31/2019

Date Prepared: 10/31/2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	6.18	250	252	98	250	250	98	1	90-110	20	

Lab Batch ID: 3106096

QC- Sample ID: 641434-036 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/31/2019

Date Prepared: 10/31/2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	435	250	658	89	250	653	87	1	90-110	20	X

Lab Batch ID: 3106096

QC- Sample ID: 641447-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/31/2019

Date Prepared: 10/31/2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	263	253	518	101	253	518	101	0	90-110	20	

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

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

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



Form 3 - MS / MSD Recoveries



Project Name: Permian Water Solutions Dorstate SWD Addiional Asses.....

Work Order #: 641434

Project ID:

Lab Batch ID: 3106136

QC- Sample ID: 641434-021 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/31/2019

Date Prepared: 10/31/2019

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1010	101	998	1030	103	2	70-135	20	
Diesel Range Organics (DRO)	<15.0	997	989	99	998	998	100	1	70-135	20	

Lab Batch ID: 3106137

QC- Sample ID: 641367-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/31/2019

Date Prepared: 10/31/2019

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1170	117	998	1190	119	2	70-135	20	
Diesel Range Organics (DRO)	<15.0	997	1190	119	998	1150	115	3	70-135	20	

Lab Batch ID: 3106228

QC- Sample ID: 641434-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/01/2019

Date Prepared: 11/01/2019

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	21.7	997	964	95	999	963	94	0	70-135	20	
Diesel Range Organics (DRO)	23.8	997	993	97	999	1030	101	4	70-135	20	

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

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

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

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4000 N. Big Spring Street, Suite 401
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

1041434

ORIGINAL COPY

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

 4000 N. Big Spring Street, Ste
 401 Midland, Texas 79705
 Tel (432) 682-4559
 Fax (432) 682-3946

041434

Page 2 of 4

Client Name:		Permian Water Solutions		Site Manager:		Clair Gonzales	
Project Name:		Dorstate SWD Additional Assessment					
Project Location: (county, state)		Eddy County, NM		Project #:		TBD	
Invoice to:		Tetra Tech, Inc.		Sampler Signature:			
Receiving Laboratory:		Xenco		Comments:			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX	PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	LAB USE ONLY	REMARKS:		
		YEAR	DATE		TIME	WATER	SOIL	HCL					HNO ₃	ICE
H-6	0-1		10/23/2019		X			X						
H-6	1-2		10/23/2019		X			X						
H-7	0-1		10/23/2019		X			X						
H-7	1-2		10/23/2019		X			X						
H-8	0-1		10/23/2019		X			X						
H-8	1-2		10/23/2019		X			X						
H-9	0-8"		10/24/2019		X			X						
H-10	0-1		10/24/2019		X			X						
H-10	1-2		10/24/2019		X			X						
H-11	0-10"		10/24/2019		X			X						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>Clair Gonzales</i>	10/24	15:45	<i>Clair Gonzales</i>	10/23	1545
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Sample Temperature	1.27/1.0
LAB USE ONLY	
REMARKS:	
<input type="checkbox"/> RUSH: Same Day 24 hr 48 hr 72 hr <input type="checkbox"/> Rush Charges Authorized <input type="checkbox"/> Special Report Limits or TRRP Report	

ORIGINAL COPY

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

 4000 N. Big Spring Street, Ste
 401 Midland, Texas 79705
 Tel (432) 682-4559
 Fax (432) 682-3946

0411434

Page 3 of 4

Client Name: Permian Water Solutions		Site Manager: Clair Gonzales	
Project Name: Dorstate SWD Additional Assessment			
Project Location: (county, state) Eddy County, NM		Project #: TBD	
Invoice to: Tetra Tech, Inc.		Receiving Laboratory: Xenco	
Comments:		Sampler Signature:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE				
									YEAR			TIME
H-12 0-1		10/24/2019		X				X			1	
H-12 1-2		10/24/2019		X				X			1	
H-13 0-1		10/24/2019		X				X			1	
H-14 0-1		10/24/2019		X				X			1	
H-14 1-2		10/24/2019		X				X			1	
H-15 0-1		10/24/2019		X				X			1	
H-15 1-2		10/24/2019		X				X			1	
H-16 0-1		10/24/2019		X				X			1	
H-16 1-2		10/24/2019		X				X			1	
H-17 0-1		10/24/2019		X				X			1	

LAB USE ONLY	REMARKS:	ANALYSIS REQUEST (Circle or Specify Method No.)	
		BTEX 8021B BTEX 8260B TPH TX1005 (Ext to C35) TPH 8015M (GRO - DRO - ORO) PAH 8270C Total Metals Ag As Ba Cd Cr Pb Se Hg TCLP Metals Ag As Ba Cd Cr Pb Se Hg TCLP Volatiles TCLP Semi Volatiles RCI GC/MS Vol. 8260B / 624 GC/MS Semi. Vol. 8270C/625 PCB's 8082 / 608 NORM PLM (Asbestos) Chloride Chloride Sulfate TDS General Water Chemistry (see attached list) Anion/Cation Balance Asbestos Hold	

Relinquished by: <i>Chapman</i>	Date: 10/29 15:45	Received by: <i>W. R. AMOR</i>	Date: 10/29 15:45
Relinquished by:	Date:	Received by:	Date:

Relinquished by:	Date:	Received by:	Date:
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ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

Sample Temperature 10/2/11.0

☐ RUSH: Same Day 24 hr 48 hr 72 hr
☐ Rush Charges Authorized
☐ Special Report Limits or TRRP Report

Analysis Request of Chain of Custody Record

[illegible]



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Tetra Tech- Midland

Date/ Time Received: 10/29/2019 03:45:00 PM

Work Order #: 641434

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 10/29/2019

Checklist reviewed by:

Jessica Kramer

Date: 10/30/2019

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 3294

CONDITIONS

Operator: Permian Water Solutions, LLC PO Box 2106 Midland, TX 79702	OGRID: 373626
	Action Number: 3294
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	Anticipate 4 monitor wells. Fourth will be placed as upgradient well if proves needed. Pre-approve all well locations before placement. Sample soils every five feet from 20 ' feet down to air-water interface. Chloride only at this time. Measure depth to water to nearest 100th of an inch.	7/29/2021