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 PERMIAN WATER SOLUTIONS, LLC	OGRID 373626
Contact Name JENNI USHER	Contact Telephone 512-820-8772
Contact email JENNI@PERMIANWS.COM	Incident # *(assigned by OCD)* nCH1834760902, nOY1823336566, nOY1821950108, nCH1821239639, nOY1803834027, nOY1730058924, nKL1632848695, nJXK1616127644, nKJ1512041707, nTO1502927174
Contact mailing address PO BOX 2106, MIDLAND, TX 79702	

Location of Release Source

Latitude 32.48086 Longitude -103.42566
(NAD 83 in decimal degrees to 5 decimal places)

Site Name KAISER STATE SWD #009	Site Type SALT WATER DISPOSAL
Date Release Discovered	API# *(if applicable)* 30-025-02538

Unit Letter	Section	Township	Range	County
F	13	21S	34E	LEA

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

Nature and Volume of Release

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

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

Cause of Release

C-141 FILED TO ADDRESS MULTIPLE HISTORICAL INCIDENTS AT THIS WELL.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? [X] Yes [ ] No	If YES, for what reason(s) does the responsible party consider this a major release? AT LEAST ONE OF THE HISTORICAL INCIDENTS REPORTED WAS GREATER THAN 25 BBLS, WHICH SIGNIFIES A MAJOR RELEASE.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

PLEASE SEE PREVIOUS C-141'S.

Initial Response

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

- [X] The source of the release has been stopped.
- [X] The impacted area has been secured to protect human health and the environment.
- [X] Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- [X] All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: JENNI USHER Title: REGULATORY ANALYST

Signature: Jenni Usher Date: 9/14/2021

email: JENNI@PERMIANWS.COM Telephone: 512-820-8772

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
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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: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: 9/21/21

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: JENNI USHER Title: REGULATORY ANALYST

Signature: Jenni Usher Date: 9/21/2021

email: JENNI@PERMIANWS.COM Telephone: 512-820-8772

OCD Only

Received by: OCD Date: 9/15/21

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

Signature: [signature] Date: 9/21/21

REMEDIATION PLAN IS TO FOLLOW SLO PHASE 1 AND PHASE 2 WORK PLANS USING TETRA TECH DELINEATION REVISED WORK PLAN DATED JANUARY 27, 2020 TO RESOLVE ALL OUTSTANDING INCIDENTS. WORK PLAN IS ATTACHED.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☐ Description of remediation activities

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

Printed Name: _____ 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: _____

Smith, Cory, EMNRD

From: dmcinturff@dufrane.com
Sent: Tuesday, September 21, 2021 2:31 PM
To: Smith, Cory, EMNRD; 'Gonzales, Clair'; 'Josh Brooks'; Crosby, Faith
Cc: 'Jenni Usher'; 'Mann, Ryan'; Bratcher, Mike, EMNRD
Subject: RE: [EXTERNAL] RE: Kaiser State #9 SWD - Requested Documents

Cory,

I understand the below information will be included in the conditions of approval and we will maintain a hardcopy of the below email.

Faith/Cory,

Will we be expecting a joint conditions of approval or will the SLO's be separate and the 2 combined will be what we are working from?

Best,
Dusty

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Tuesday, September 21, 2021 3:16 PM
To: dmcinturff@dufrane.com; 'Gonzales, Clair' <Clair.Gonzales@tetratech.com>; 'Josh Brooks' <josh@permianws.com>
Cc: 'Jenni Usher' <jenni@permianws.com>; Crosby, Faith <fcrosby@slo.state.nm.us>; Mann, Ryan <rmann@slo.state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: RE: [EXTERNAL] RE: Kaiser State #9 SWD - Requested Documents

Good Afternoon Dusty,

OCD has received the Permian Water Solutions (PWS) proposed remediation plan for the Kaiser State SWD #9 API# 30-025-02538 via email on 9/15/21 and has approved it with the following conditions of approval:

- PWS will sample all side walls and bases of the excavation by collecting a 5 point soil composite sample not to exceed 400 sqft. In addition to the 5pt composite samples PWS will collect individual grab samples for any wet/or discolored areas as needed per 19.15.29 NMAC.

- PWS will physically mark sample areas.

- All soil samples will be analyzed for the constituents listed in Table 1 of 19.15.29 NMAC

- Closure/Reclamation standards in the top 4' of the excavation will be:
  - 600 mg/kg Chlorides (Or background whichever is higher.) If a background sample is collected it must be collected upgradient, off the disturbed well pad no further than 100' from the site. This sample must be witnessed by a regulatory agency.
  - 100 mg/kg TPH (GRO+DRO+MRO)
  - 50 mg/kg BTEX
  - 10 mg/kg Benzene

- Closure Standards for soils deeper than 4'
  - 10,000 mg/kg Chlorides
  - 2,500 mg/kg TPH (GRO+DRO+MRO)
  - 1,000 mg/kg TPH (GRO+DRO)
  - 50 mg/kg BTEX
  - 10 mg/kg Benzene

- PWS will excavate until the closure standards above have been met or until It becomes infeasible at which time PWS will submit to the OCD an alternative remediation plan for the remaining impacts.

- PWS will provide confirmation sampling notice to the OCD (cory.smith@state.nm.us) pursuant to 19.15.29 NMAC for all closure confirmation samples

- PWS must remediate the entire site (both phase 1 and 2 from the SLO plan) no later than December 22, 2021 and submit a closure report pursuant to 19.15.29 NMAC no later than 60 days following the completion of remediation to be in consideration for closure. If additional time is needed PWS can request additional time with OCD.

- Authorization to transport from or to inject into the Kaiser State SWD #9 must be approved by the OCD Engineering Bureau prior to any injection.

- OCD approval of this work plan does not relieve Permian Water Solutions from any other requirements imposed by other applicable regulatory agencies.

PWS will need to consult with the OCD prior to leaving any impacts in place, or installing any type of liners etc. This remediation plan is for the following incidents

nCH1834760902, nOY1823336566, nOY1821950108, nCH1821239639, nOY1803834027, nOY1730058924, nKL1632848695, nJXK1616127644, nKJ1512041707, nTO1502927174

Please keep a copy of this approval email as a hard copy will not be sent to you, in addition please include this approval in your final C-141. If you have any additional questions please feel free to contact me as soon as possible.

Cory Smith • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
5200 Oakland Avenue N.E Suite 100 | Albuquerque, NM 87113
505.419.2687 | Cory.Smith@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: dmcinturff@dufrane.com <dmcinturff@dufrane.com>
Sent: Wednesday, September 15, 2021 2:52 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; 'Gonzales, Clair' <Clair.Gonzales@tetratech.com>; 'Josh Brooks' <josh@permianws.com>
Cc: 'Jenni Usher' <jenni@permianws.com>
Subject: [EXTERNAL] RE: Kaiser State #9 SWD - Requested Documents

Cory,

See attached for the requested documents for the combined workplans from SLO and Tetra Tech, the C-141 with all incidents listed, and letterhead stating the use of SLO workplans/tetra tech delineation.

I did not include the MW #1 data as Clair has already sent that to you, but if you would like me to resend I can.

Let me know if you need anything else.

Best,
Dusty

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Tuesday, September 14, 2021 9:46 AM
To: dmcinturff@dufrane.com; 'Gonzales, Clair' <Clair.Gonzales@tetratech.com>; 'Josh Brooks' <josh@permianws.com>
Cc: 'Jenni Usher' <jenni@permianws.com>
Subject: RE: Kaiser State #9 SWD - Requested Documents

Good Morning Dusty,

Can I get the combine official work plan from PWS that we had discussed last week during the meeting?

I need a C-141 and a document telling the OCD that you indented to follow the SLO Phase 1 and Phase 2 plan, using the Tetra tech delineation report.

In addition it needs to have some timelines on when you expect to completed with both phases.

Cory Smith • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
5200 Oakland Avenue N.E Suite 100 | Albuquerque, NM 87113
505.419.2687 | Cory.Smith@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Smith, Cory, EMNRD
Sent: Friday, September 3, 2021 11:41 AM
To: dmcinturff@dufrane.com; 'Gonzales, Clair' <Clair.Gonzales@tetratech.com>; 'Josh Brooks' <josh@permianws.com>
Cc: 'Jenni Usher' <jenni@permianws.com>
Subject: RE: Kaiser State #9 SWD - Requested Documents

Dusty,

Thank you for the update, I will review both the SLO Plans below and use the Tetra Tech delineation data for consideration and try and get you an OCD approved plan ASAP.

I do have a request I was told that there is a weekly meeting between PWS and SLO if possible may I please get an invite to the next meeting.

Thanks,

Cory Smith • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
5200 Oakland Avenue N.E Suite 100 | Albuquerque, NM 87113
505.419.2687 | Cory.Smith@state.nm.us

http://www.emnrd.state.nm.us/OCD/

From: dmcinturff@dufrane.com <dmcinturff@dufrane.com>
Sent: Wednesday, September 1, 2021 4:41 PM
To: 'Gonzales, Clair' <Clair.Gonzales@tetratech.com>; Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; 'Josh Brooks' <josh@permianws.com>
Cc: 'Jenni Usher' <jenni@permianws.com>
Subject: RE: Kaiser State #9 SWD - Requested Documents

Cory,

The Tetra Tech work plan that I sent you is the version that was submitted to the OCD, but what we are working to in the field is the SLO phase 1 & 2 plan. The SLO has mandated that we excavate down to 15' throughout phase 1. The difference in plans is Tetra Tech had recommended alternate depths, some less than 15', based on their bore samples so in most areas we are beyond the suggested depths of the tetra tech report. We are approximately 60% into the phase 1 excavation. Phase 1 is the red area on the KMZ I sent over. I have also inserted the phase 1 and 2 from the SLO if you haven't already seen them.

Kaiser State SWD #9

Phase 2 Work Plan Tasks:

1. Submit new pad site plan.
2. Remove any remaining equipment & debris on site.
3. Excavate Phase 2 remediation areas to Map Key listed depths.
   a) All areas not noted in key, excavate to 6'.
   b) Final samples to the following closure criteria:
      - 1,000 mg/kg TPH
      - 7,000 mg/kg Cl⁻
      - BTEX ND
4. Backfill non-blended soils and place a clay membrane/bentonite mat at minimum 5'.
5. Investigate off-pad spills and coordinate remediation with SLO.
6. Reclaim off pad areas.

Map Key:

- Completed/Out of scope areas
- Areas of 15' excavation
- Pit location min 1' excavation
- Pasture spills at new temporary staging area location

First four stages to take no more than 150 days.

Plan may change subject to sample data from soil and water testing.

Kaiser State SWD #9

Phase 1 Work Plan Close-Out Tasks:

1. Installation of Test Well #2.
   a) Determines source of ground water contamination.
   b) Develop monitoring and recovery well abatement program to remediate ground water and capture extent of plume.
2. Phase 1 Final Report.
   a) Confirm all Phase 1 tasks were completed.
   b) Include photos, final samples etc.
3. Conduct Phase 1 field inspection with SLO staff.

Map Key:

- Site outline
- Phase 1 Remediation Area
- Test Well #2

Plan may change subject to sample data from soil and water testing.

Best,
Dusty

From: Gonzales, Clair <Clair.Gonzales@tetratech.com>
Sent: Wednesday, September 1, 2021 5:00 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; dmcinturff@dufrane.com; 'Josh Brooks' <josh@permianws.com>

Cc: 'Jenni Usher' <jenni@permianws.com>
Subject: RE: Kaiser State #9 SWD - Requested Documents

Cory,

Attached is the laboratory data for the samples collected at the temporary well that was installed. Let me know if you have any questions or concerns.

Thank you,

Clair Gonzales,

Clair Gonzales, P.G. | **Project Manager & Office Lead**
Phone: 432.687.8123| Mobile 432.260.8634 | Fax:432.682.3946
clair.gonzales@tetratech.com

Tetra Tech | Complex World, CLEAR SOLUTIONS™
901 West Wall Street, Ste 100 | Midland, TX 79701 | www.tetratech.com

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From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Wednesday, September 1, 2021 4:43 PM
To: dmcinturff@dufrane.com; 'Josh Brooks' <josh@permianws.com>
Cc: 'Jenni Usher' <jenni@permianws.com>; Gonzales, Clair <Clair.Gonzales@tetratech.com>
Subject: RE: Kaiser State #9 SWD - Requested Documents

Dusty,

Thank you for the information is there a Laboratory analytical data not a summary table for the water sample I can see?

Any follow up on "If I understand correctly the Work plan that you sent me is the one that PWS intends to follow is this correct? It appears that this is the Tetra Tech work plan that pre dated the SLO work phase 1 and Phase 2 plans is that correct? "

I just want to make sure I am looking over the right plan so we are not wasting any ones time.

Cory Smith • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
5200 Oakland Avenue N.E Suite 100 | Albuquerque, NM 87113
505.419.2687 | Cory.Smith@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: dmcinturff@dufrane.com <dmcinturff@dufrane.com>
Sent: Tuesday, August 31, 2021 2:48 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; 'Josh Brooks' <josh@permianws.com>
Cc: 'Jenni Usher' <jenni@permianws.com>; 'Gonzales, Clair' <Clair.Gonzales@tetratech.com>
Subject: RE: Kaiser State #9 SWD - Requested Documents

Cory,

See attached email from Clair over at Tetra Tech and the water sample table for the first well we drilled. Once Clair has the Permanent monitoring well water sample data I will send that over as well.

Best,
Dusty

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Tuesday, August 31, 2021 11:37 AM
To: Josh Brooks <josh@permianws.com>; dmcinturff@dufrane.com
Cc: Jenni Usher <jenni@permianws.com>; Gonzales, Clair <Clair.Gonzales@tetratech.com>
Subject: RE: Kaiser State #9 SWD - Requested Documents

Josh,

Thank you for the clarification.

I do have a few questions Dusty,

MW-2 was drilled and found water at 81' was it sampled? If so please send me the laboratory analysis.
MW-3 from what I understand has been drilled, What was the water level? And was a water sample collected? If so please also send me the water samples.

If I understand correctly the Work plan that you sent me is the one that PWS intends to follow is this correct? It appears that this is the Tetra Tech work plan that pre dated the SLO work phase 1 and Phase 2 plans is that correct?

I apologize for some of the Basic questions I am just trying to get a quick grasp at the situation so I can get you an approval as soon as possible as I understand this site has activity on going.

Cory Smith • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
5200 Oakland Avenue N.E Suite 100 | Albuquerque, NM 87113
505.419.2687 | Cory.Smith@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Josh Brooks <josh@permianws.com>
Sent: Tuesday, August 31, 2021 7:56 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; dmcinturff@dufrane.com
Cc: Jenni Usher <jenni@permianws.com>; Gonzales, Clair <Clair.Gonzales@tetratech.com>
Subject: Re: Kaiser State #9 SWD - Requested Documents

Hello Mr. Smith,

Dufrane and Permian Water Solutions have common ownership.

I am the principal for both companies.

Dufrane is performing the remediation and Dusty is taking point for both companies in our attempt to streamline the process.

We acquired PWS last spring and are working towards a clean bill of health.

If you have questions or would like to visit, please feel free to contact me.

Best ,

Joshua Brooks
P.O. BOX 2106
MIDLAND, TEXAS 79702
432-219-0741
617-584-2889 (Cell)
Josh@permianws.com

From: "Smith, Cory, EMNRD" <Cory.Smith@state.nm.us>
Date: Monday, August 30, 2021 at 4:18 PM
To: "dmcinturff@dufrane.com" <dmcinturff@dufrane.com>
Cc: Jenni Usher <jenni@permianws.com>, "'Gonzales, Clair'" <Clair.Gonzales@tetratech.com>, Josh Brooks <jbrooks@dufrane.com>
Subject: RE: Kaiser State #9 SWD - Requested Documents

Mr. McInturff,

Are you an employee of Permian Water Solutions or a third party contractor?

I am sorry the Dufrane construction is confusing me.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
Albuquerque Office
(505)334-6178 ext 115
cory.smith@state.nm.us

From: dmcinturff@dufrane.com <dmcinturff@dufrane.com>
Sent: Monday, August 30, 2021 1:52 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Jenni Usher <jenni@permianws.com>; 'Gonzales, Clair' <Clair.Gonzales@tetratech.com>; 'Josh Brooks' <jbrooks@dufrane.com>
Subject: Kaiser State #9 SWD - Requested Documents

Cory,

I would like to introduce myself. My name is Dusty McInturff and I am a project manager for Dufrane Construction and I am currently working as PM on the Kaiser State #9 SWD remediation. Jenni Usher with Permian Water Solutions has been in contact with you regarding the OCD's involvement on the remediation and she has asked that I send you some documents you requested and also the layout of the facility as it is now and future layout. I have attached the OSE documents and a Google Earth KMZ of the location. This is current to the documents that the SLO possesses. I will be your point of contact for the Kaiser so if you have any questions or need clarification please let me know. I have also included Tetra Tech work plan for the remediation.

Kind regards,

Dusty McInturff
Project Manager
Dufrane Construction, LLC.
dmcinturff@dufrane.com
432-634-7865 Mobile
www.dufrane.com

September 15, 2021

Environmental Bureau
EMNRD - Oil Conservation Division
5200 Oakland Avenue N.E Suite 100
Albuquerque, NM 87113

RE: Kaiser State #9 SWD - Site Remediation

To Whom It May Concern,

Dufrane Construction is working toward completion of remediation to the Kaiser State #9 SWD location per the New Mexico SLO Phase 1 and Phase 2 workplans for remediation with the use of the Tetra Tech delineation report. The estimated timeline for phase 1 completion would tentatively be 2 to 3 months depending on field conditions and testing. The estimated timeline for phase 2 should be about the same allotment of 2 to 3 months once started. Both phases would require 2 to 3 months each at this time. There are some field conditions with pipeline ROW's we are dealing with that will impact phase 2.

Sincerely,

Dusty McInturff
Project Manager
Dufrane Construction LLC
Email: dmcinturff@dufrane.com
Cell: (432) 634-7865

2020-04-07 Plan Recommendations: The proposed timeline for the plan is 90 days.

The max TPH discovered was 34, 860 mg/kg, max Cl^- 30,000 mg/kg and BTEX at 348 mg/kg. Contamination depths have reached at least 25'. Contamination was found in all areas in and around the pad and berm as well as the offsite areas tested.

Tasks:

- Remove all tank batteries, surface and buried pipelines, off-loading station and extraneous debris, including tanks in the pasture area.
- Any items that will be re-used may not be stored on site.
- Excavate the remediation area (inside dashed red line) to 15'. This shall be the new location of the replacement tank battery.
- Requirements for final samples:
    - Floor samples to be taken in same location as previous samples.
    - No less than 3 each cardinal sidewall samples around the perimeter.
    - Samples shall meet the following criteria: 1,000 mg/kg TPH, 7,000 mg/kg Cl^- and BTEX ND.
    - PWS shall give SLO 1 week notice prior to final samples being taken so that SLO staff may attend and take duplicate samples at PWS cost.
- Backfill pit and excavations with clean, non-blended soils and place a clay membrane/bentonite mat at 4'-5'.

Timeline:

- All equipment to be removed within 45 days.
- Excavation and final sampling to be completed within 45 days.
- Backfill and clay membrane liner placement to be completed within 60 days.

Once Phase 1 is complete, PWS may construct a new tank battery with falcon-type liner, receive a written acceptance of installation, and re-commence commence injection for a period of 6 months. SLO will review activities for compliance with all environmental and easement requirements.

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Land Stewardship
Renewable Energy
Outdoor Recreation
Oil, Gas and Minerals
Business Development

Phase 1 Work Plan Tasks Site Map

Kaiser State SWD #1

Phase 1 Work Plan Tasks:

- Site outline
- Phase 1 remediation area

1. Remove all equipment & debris on site.
2. Excavate Phase 1 remediation area to 15'.
   a) Final samples to the following closure criteria:
      - 1,000 mg/kg TPH
      - 7,000 mg/kg Cl⁻
      - BTEX ND
3. Backfill non-blended soils and place a clay membrane/bentonite mat at 4'-5'.

All three stages to take no more than 45 days.

MEMORANDUM

Subject: Kaiser State #9 **Phase 2 Remediation Work Plan**

Remediation Plan Requirements:

Phase 1 closeout must be completed including:

- Installation of Test Well #2
  - Determination of source of groundwater contamination;
  - Development of abatement program with monitoring and recovery wells and reporting program.
- Phase 1 Final Report
  - Include photos, final samples etc.;
  - SLO to confirm and approve.

A. Tasks:
   - Submit new pad site plan for SLO review and approval.
   - Remove any remaining equipment and debris in area.
   - Excavate Phase 2 remediation areas to Map and Key listed depths.
     i. All areas not noted in key, excavate to 6'.
   - Requirements for final samples:
     i. Floor samples to be taken in same location as previous samples.
     ii. No less than 3 each cardinal sidewall samples around the perimeter.
     iii. Samples shall meet the following criteria: 1,000 mg/kg TPH, 7,000 mg/kg Cl^-, and BTEX ND.
     iv. PWS shall give SLO 1 week notice prior to final samples being taken so that SLO staff may attend and take duplicate samples at PWS cost.
   - Backfill non-blended soils and place a clay/bentonite mat at a minimum of 5'.
   - Investigate off-pad spills and coordinate remediation and reclamation with SLO.
   - Reclaim unused roads/pad areas in coordination with SLO.

B. Timeline:
   - All equipment/debris to be removed within 30 days.
   - Excavation and final sampling to be completed with 60 days.
   - Backfill and clay membrane liner placement to be completed within 60 days.
   - The proposed timeline for the first four stages is no more than 150 days.

Plan may be subject to change depending on data from soil and water samples.

SLO approval does not relieve Permian Water Solutions of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, SLO approval does not relieve PWS of responsibility for compliance with any other federal, state, local laws and/or regulations.

Kaiser State SWD #9

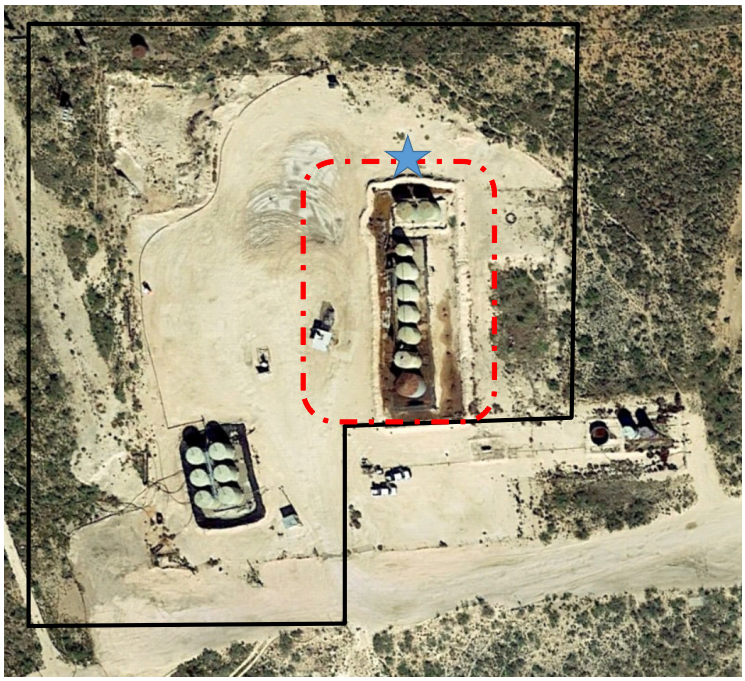
Phase 1 Work Plan Close-Out Tasks:

1. Installation of Test Well #2.
   a) Determine source of groundwater contamination.
   b) Develop monitoring and recovery well abatement program to remediate ground water and capture extent of plume.
2. Phase 1 Final Report.
   a) Confirm all Phase 1 tasks were completed.
   b) Include photos, final samples etc.
3. Conduct Phase 1 field inspection with SLO staff.

Map Key:

- Site outline
- Phase 1 Remediation Area
- Test Well #2

Plan may change subject to sample data from soil and water testing.



Kaiser State SWD #9

Phase 2 Work Plan Tasks:

1. Submit new pad site plan.
2. Remove any remaining equipment & debris on site.
3. Excavate Phase 2 remediation areas to Map Key listed depths.
   a) All areas not noted in key, excavate to 6'.
   b) Final samples to the following closure criteria:
      - 1,000 mg/kg TPH
      - 7,000 mg/kg Cl⁻
      - BTEX ND
4. Backfill non-blended soils and place a clay membrane/bentonite mat at minimum 5'.
5. Investigate off-pad spills and coordinate remediation with SLO.
6. Reclaim off pad areas.

Map Key:

- Completed/Out of scope areas
- Areas of 15' excavation
- Pit location min 1' excavation
- Pasture spills at new temporary staging area location

First four stages to take no more than 150 days.

Plan may change subject to sample data from soil and water testing.

SITE INFORMATION

Report Type: Revised Work Plan

General Site Information:						
Site:	**Kaiser State SWD**					
Company:	**Permian Water Solutions**					
Section, Township and Range	**Unit F**	**Sec. 13**	**T 21S**	**R 34E**		
Lease Number:	**API No. 30-025-02538**					
County:	**Lea**					
GPS:	**32.48086**			**-103.42566**		
Surface Owner:	**State**					
Directions:	From the intersection of HWY 176 and CR 32 (San Simon Rd) in rural Lea County, travel west on HWY 176 for approximately 0.25 miles, turn south onto lease road and continue for 0.25 miles to Y in the road, continue right for an additional 0.30 miles to the location on the north side of the lease road.					

Release Data:	**1RP-3512**	**1RP-3621**	**1RP-4305**
Date Released:	1/14/2015	4/24/2015	5/17/2016
Type Release:	Produced Water	Produced Water	Produced Water
Source of Contamination:	Vac Truck	Truck hit load line	Lightning Strike
Fluid Released:	20 bbls	100 bbls	1050 bbls
Fluids Recovered:	20 bbls	100 bbls	1050 bbls

Release Data:	**1RP-4525**	**1RP-4855**	**1RP-4960**
Date Released:	Unknown	10/18/2017	1/31/2018
Type Release:	Produced Water	Produced Water & Oil	Produced Water
Source of Contamination:	Frac Tanks	Unkown	Seal on Pump
Fluid Released:	Unknown	50 bbls	20 bbls
Fluids Recovered:	0 bbls	0 bbls water	10 bbls

Release Data:	**1RP-5139**	**1RP-5149**	**1RP-5163**
Date Released:	6/20/2018	8/6/2018	8/17/2018
Type Release:	Produced Water	Produced Water	Produced Water
Source of Contamination:	Wellhead	Valve	Unload Tanks
Fluid Released:	150 bbls	200 bbls	500 bbls
Fluids Recovered:	150 bbls	200 bbls	500 bbls

Release Data:	**1RP-5273**	
Date Released:	11/2/2018	
Type Release:	Oil	
Source of Contamination:	Tank Overflow	
Fluid Released:	20 bbls	
Fluids Recovered:	16 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@tetratech.com

Site Characterization	
Depth to Groundwater:	*Greater than 100'*
Karst Potential:	*Low*

Recommended Remedial Action Levels (RRALs)				
Benzene	***Total BTEX***	***TPH (GRO+DRO)***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*1,000 mg/kg*	*2,500 mg/kg*	*20,000 mg/kg*

TETRA TECH

January 27, 2020

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

Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico, 88240

Re: Revised Work Plan for the Permian Water Solutions, LLC., Kaiser State SWD, Unit F, Section 13, Township 21 South, Range 34 East, Lea 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 Kaiser State SWD, Unit F, Section 13, Township 21 South, Range 34 East, Lea County, New Mexico. The site coordinates are 32.48086°, -103.42566°. The site location is shown on Figures 1 and 2.

Background

Ten releases occurred at the site impacting the pad area and inside the facility berms. The initial C-141 Forms are included in Appendix A.

- **1RP-3512:** According to the State of New Mexico C-141 Initial Report submitted by Pyote Water Systems, LLC the release was discovered on January 14, 2015 and released approximately 20 bbls of produced water due to a vac truck over filling the sumps. Approximately 20 bbls of fluids were recovered.

- **1RP-3621:** According to the State of New Mexico C-141 Initial Report submitted by Pyote Water Systems, LLC the release was discovered on April 24, 2015 and released approximately 100 barrels of produced water due to a truck hitting a load line. Approximately 100 bbls of fluids were recovered.

- **1RP-4305:** According to the State of New Mexico C-141 Initial Report submitted by Pyote Water Systems, LLC the release was discovered on May 17, 2016 and released approximately 1050 barrels of produced water due to a lightning strike. Approximately 1050 bbls of fluids were recovered.

- **1RP-4525:** According to the State of New Mexico C-141 Initial Report submitted by Cambrian Management, LTD the release was due to a leak in the frac tanks used during facility reconstruction after the lightning strike. An unknown volume of fluids was released, and none were recovered.

Tetra Tech
4000 North Big Spring, Suite 401, Midland, TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

- **1RP-4855:** According to the State of New Mexico C-141 Initial Report submitted by Cambrian Management, LTD the release was discovered on October 18, 2017 and released approximately 50 bbls of produced water and crude oil within the berm due to an unknown cause. None of the fluids were recovered.

- **1RP-4960:** According to the State of New Mexico C-141 Initial Report submitted by Cambrian Management, LTD the release was discovered on January 31, 2018 and released approximately 20 bbls of produced water due to a failed seal on a pump. Vacuum trucks were dispatched to remove all free-standing fluids, recovering approximately 10 bbls of fluids.

- **1RP-5139:** According to the State of New Mexico C-141 Initial Report submitted by Cambrian Management, LTD the release was discovered on June 20, 2018 and released approximately 150 bbls of produced water due to a nipple on the wellhead. Approximately 150 bbls of fluids were recovered.

- **1RP-5149:** According to the State of New Mexico C-141 Initial Report submitted by Cambrian Management, LTD the release was discovered on August 6, 2018 and released approximately 200 bbls of produced water due to a valve misfunction. Approximately 200 bbls of fluids were recovered.

- **1RP-5163:** According to the State of New Mexico C-141 Initial Report submitted by Cambrian Management, LTD the release was discovered on August 17, 2018 and released approximately 500 bbls of produced water due to a valve misfunction, causing tanks to over flow into the lined berm. Approximately 500 bbls of fluids were recovered.

- **1RP-5273:** According to the State of New Mexico C-141 Initial Report submitted by Permian Water Solutions, LLC the release was discovered November 2, 2018 and released approximately 20 bbls of crude oil due to an oil skim tank overflowing into the berm. Approximately 16 bbls of fluids were recovered.

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. Additionally, the site is located in a low karst potential area. The nearest well is listed on the USGS Water Information System database in Section 13, approximately ½ mile south of the site, and has a reported depth to groundwater of 101' below surface. According to the Chevron Texaco Groundwater Trend map, the average depth to groundwater in this area is between 100' and 125' 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,

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 2,500 mg/kg (GRO + DRO + MRO) or 1,000 mg/kg (GRO + DRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 20,000 mg/kg.

Soil Assessment and Analytical Results

Initial Assessment

Between May 7th and May 14th, 2019, Tetra Tech personnel were onsite to sample the facility areas. A total of thirty-one (31) sample points were installed to total depths ranging from 0-1' and 39'-40' below surface. Sample points SP-1, SP-2, SP-4, SP-5, SP-6, SP-7, SP-8, SP-9, SP-10, SP-11, SP-12, SP-14, SP-15, SP-16, SP-27, SP-29, SP-30, SP-31, and SP-32 were installed using a truck mounted air rotary rig. Due to access and safety issues, sample points SP-3, SP-13, SP-17, SP-18, SP-19, SP-20, SP-21, SP-22, SP-23, SP-24, SP-25, and SP-26 were installed using a stainless-steel hand auger. 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. 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 drilling logs are shown in Appendix C. The sample locations are shown on Figure 3.

Pad and Facility Areas

Referring to Table 1, sample points SP-1 through SP-16 and SP-27 through SP-32 did not show any benzene or total BTEX concentrations above the RRALs. However, sample points SP-2, SP-5, and SP-27 showed TPH concentrations above the RRALs with TPH highs of 20,034 mg/kg, 18,710 mg/kg, and 6,850 mg/kg at 6'-7' below surface, respectively. The TPH concentrations then declined with depth to below the RRALs at depths ranging from 9'-10' and 19'-20' below surface. None of the other sample points on the pad and facility areas showed TPH concentrations above the thresholds.

Additionally, the area of sample point (SP-8) showed a chloride concentration above the 20,000 mg/kg threshold at 0-1' below surface, which declined with depth and showed a bottom hole concentration of 96.0 mg/kg at 29'-30' below surface. None of the remaining sample points on the pad and facility areas showed chloride concentrations above the RRAL.

Bermed Areas

The areas of sample points (SP-17 through SP-26), which were collected inside the bermed facilities, were installed to total depths ranging from 0-1' and 5-5.5' below surface. Deeper samples could not be collected due to a dense formation in the area and the truck mounted air rotary rig could not safely access these areas for deeper samples.

Referring to Table 1, the area of sample point (SP-22) did not show any benzene, total BTEX, TPH, or chloride concentrations above the RRALs. However, the areas of sample points (SP-17, SP-18, SP-19, SP-20, SP-21, SP-23, SP-24, SP-25, and SP-26) showed elevated TPH concentrations to the soils. The areas of sample points (SP-17, SP-21, and SP-25) showed TPH concentrations that declined with depth to below the thresholds at 2-3' below surface. The remaining areas were not vertically defined for TPH.

Additionally, the area of sample point (SP-20) showed benzene and total BTEX concentrations above the RRALs which were not vertically defined at 5-5.5' below surface. None of the remaining sample points inside the bermed facilities showed benzene concentrations above the 10 mg/kg threshold. In addition, the areas of sample points (SP-17, SP-21, SP-24 and SP-26) did not show any total BTEX concentrations above the RRALs. However, the areas of (SP-18, SP-19, SP-21, SP-23, and SP-25) showed total BTEX concentrations above the RRALs and the areas of sample points (SP-19, SP-20, and SP-23) were not vertically defined.

None of the samples collected at sample points (SP-17 through SP-26) showed chloride concentrations above the 20,000 mg/kg threshold.

Additional Assessment

As requested by NMSLO, Permian Water Solutions removed the tanks and equipment from the two onsite facilities to allow access for vertical delineation. Tetra Tech personnel returned to the site on October 21-22, 2019, in order to vertically delineate the areas of SP-17 (BH-17), SP-18 (BH-18), SP-19 (BH-19), SP-20 (BH-20), SP-23 (BH-23), SP-24 (BH-24), SP-25 (BH-25), and SP-26 (BH-26) as well as to install four additional soil borings (BH-33, BH-34, BH-35, and BH-36) beneath the tanks of the eastern facility. The soil borings were installed using a truck mounted air rotary rig to total depths ranging from 19'-20' and 54'-55' below surface. 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. 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

Referring to Table 1, none of the samples collected at any of the boreholes showed any benzene or chloride concentrations above the RRALs. Additionally, none of the samples collected at BH-17, BH-33, or BH-35 showed total BTEX or TPH concentrations above the RRALs.

The area of BH-36 showed a TPH high concentration of 9,630 mg/kg at 0-1', which declined with depth to 710 mg/kg at 2-3' below surface. The areas of BH-18, BH-24, and BH-34 showed TPH high concentrations of 12,700 mg/kg at 0-1', 6,400 mg/kg at 2-3', and 10,200 mg/kg at 0-1', respectively, which then declined with depth to below the RRALs at 4'-5' below surface. The areas of BH-19, BH-23, BH-25, and BH-26 showed elevated TPH concentrations to depths of 4-5', before declining with depth to below the RRALs at 6-7' below surface.

The areas of BH- 18, BH-19, BH-23, BH-24, BH-26, BH-34, and BH-36 did not show any total BTEX concentrations above the RRALs. However, the area of BH-20 showed a BTEX high concentration of 119 mg/kg at 6-7', which declined with depth to 16.1 mg/kg at 9'-10' below surface and the area of BH-25 showed a BTEX high of 194 mg/kg at 4-5' which declined with depth to below the laboratory reporting limit at 6-7' below surface.

At the request of NMSLO, the tanks located in the western berm were removed and Tetra Tech returned to the site on January 13, 2020 to install 2 additional bore holes (SP-37 and SP-38) beneath the previous location of the tanks. The soil borings were installed using a truck mounted air rotary rig to total depths ranging from 24'-25' and 34'-35' below surface. All 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. 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

Referring to Table 1, none of the samples collected showed benzene concentrations above the RRAL. Additionally, none of the samples collected in the areas of SP-37 and SP-38 showed chloride concentrations above the RRAL, with chloride high concentrations of 4,810 mg/kg (4'-5') and 6,130 mg/kg (2'-3'), respectively. The chloride concentrations then decreased with depth to below 600 mg/kg at 14'-15' (SP-37) and 19'-20' (SP-38). However, both areas showed TPH highs of 6,260 mg/kg (SP-37) and 7,340 mg/kg (SP-38) at 4'-5, which then decreased with depth to below the RRALs at 6'-7' below surface. Additionally, BTEX highs of 178 mg/kg (SP-37) and 51.0 mg/kg (SP-38) were detected at 4'-5', which decreased to below the RRAL at 6'-7' below surface.

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-3, SP-6, SP-7, SP-9, SP-10, SP-21, and SP-30 will be excavated to 6" to 1.0' below surface to address the surficial impact. The areas of sample points SP-2, SP-8, and SP-27 will be excavated to approximately 6'-7' below surface and the area of sample point SP-5 will be excavated to approximately 14-15' below surface. Additionally, as requested by NMSLO, the area of SP-4 will be excavated to 4-5' below surface.

To address the areas inside the bermed facilities, Permian Water Solutions proposes to excavate the areas of sample points SP-17, SP-18, SP-24, and SP-34 to approximately 3'

below surface, the areas of SP-19, SP-23, SP-25, SP-26, SP-36, SP-37, and SP-38 to approximately 5', and the area of SP-20 to approximately 10' below surface.

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, including the area of SP-3. Permian Water Solutions estimates approximately 15,200 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.

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 safely concerns for onsite personnel. As such, Permian Water Solutions will excavate the impacted soils to the maximum extent practicable.

Conclusion

Once the remediation activities are completed, a closure 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.

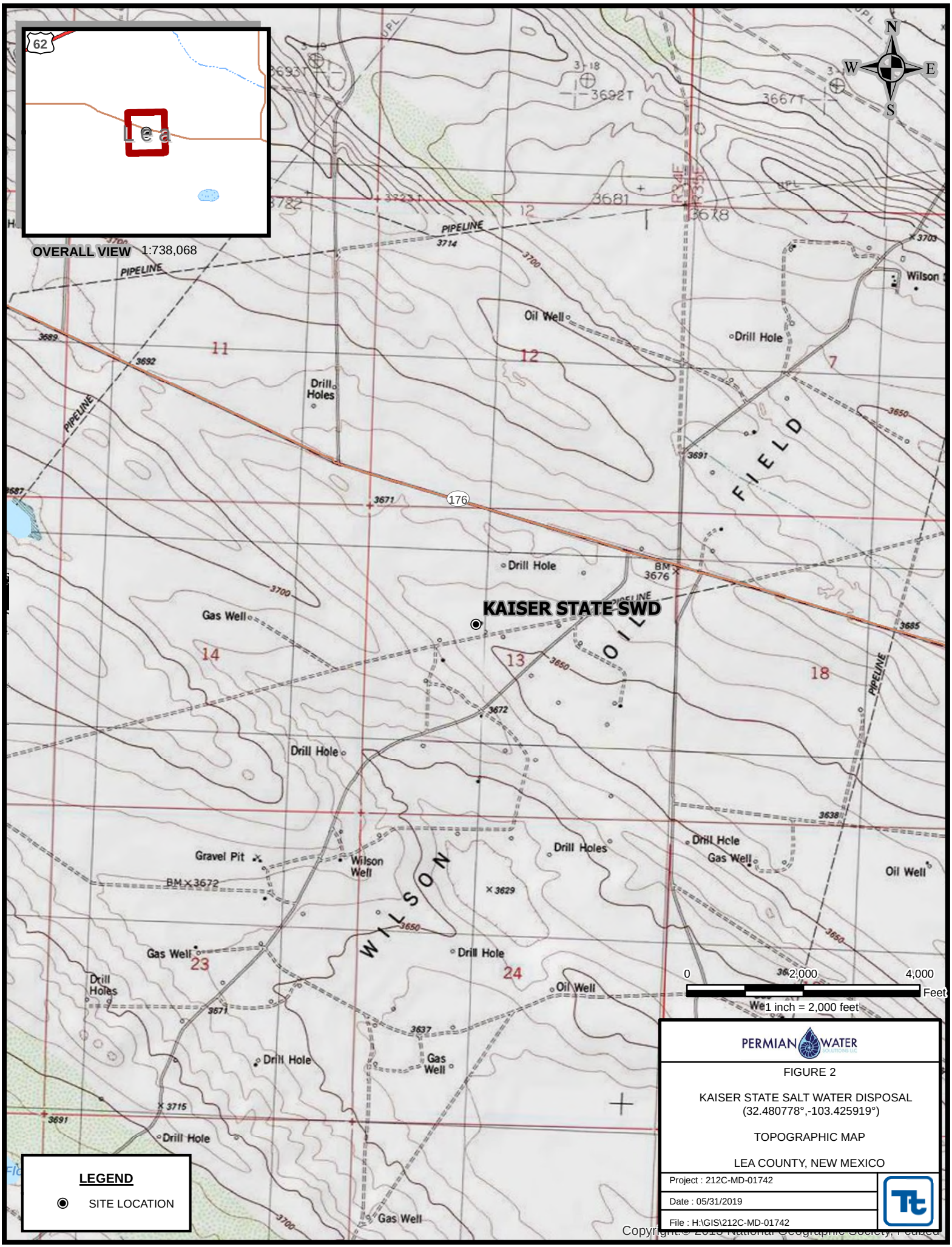
Respectfully submitted,
TETRA TECH

Clair Gonzales, P.G.,
Project Manager

Figures

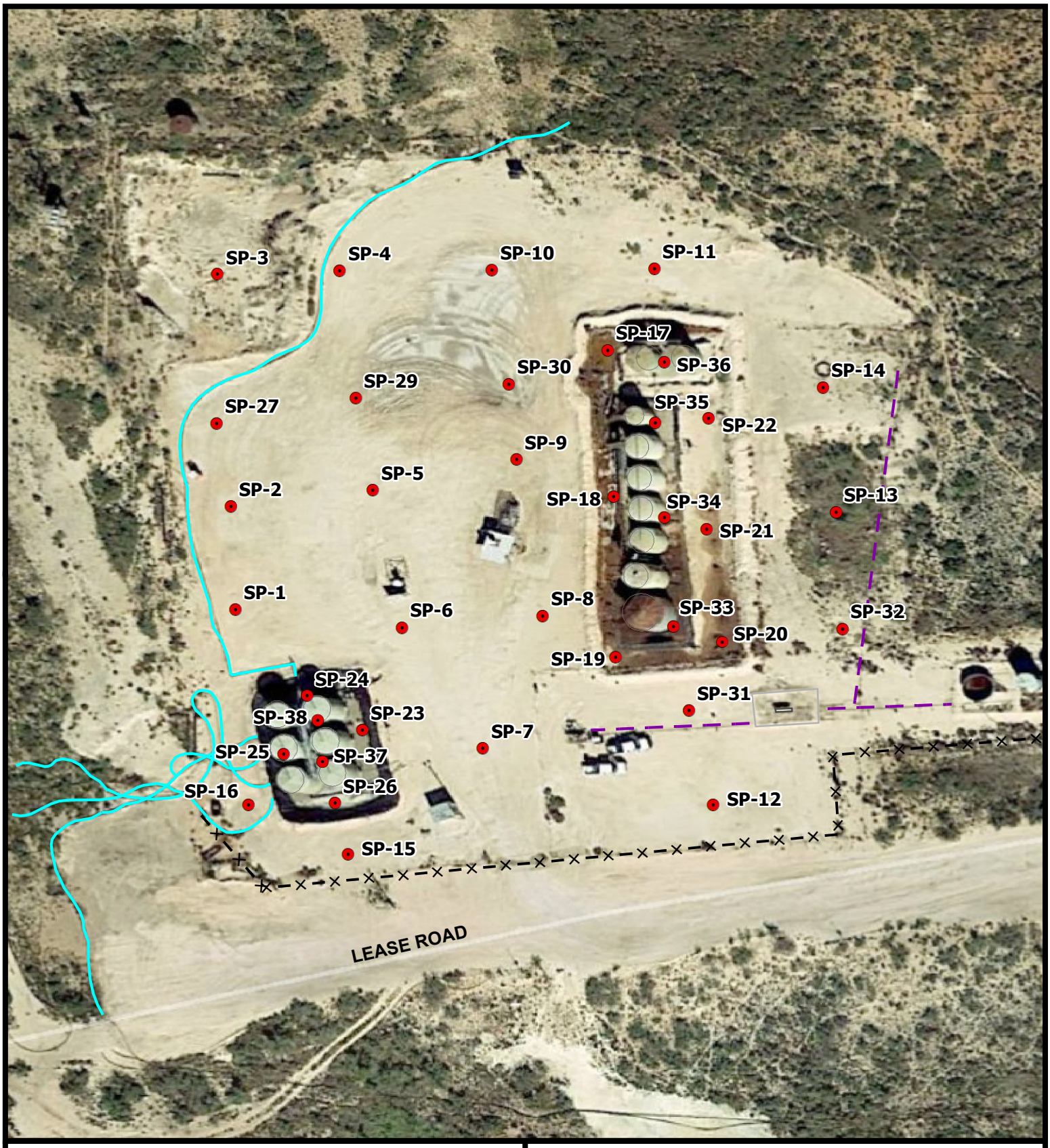
MAPPED BY: MISTI MORGAN

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



MAPPED BY: MISTI MORGAN

Sources: Esri, Copyright:© 2013 National Geographic Society, i-cubed



SAMPLE LOCATIONS
EXPOSED PIPELINE
BURIED PIPELINE
FENCELINE
EQUIPMENT

N
W
E
S

0 40 80
Approximate Scale in Feet

Source: "New Mexico". 32°28'50.80"N, 103°25'33.31"W. **Google Earth**. November 02,2017. November 7, 2019.

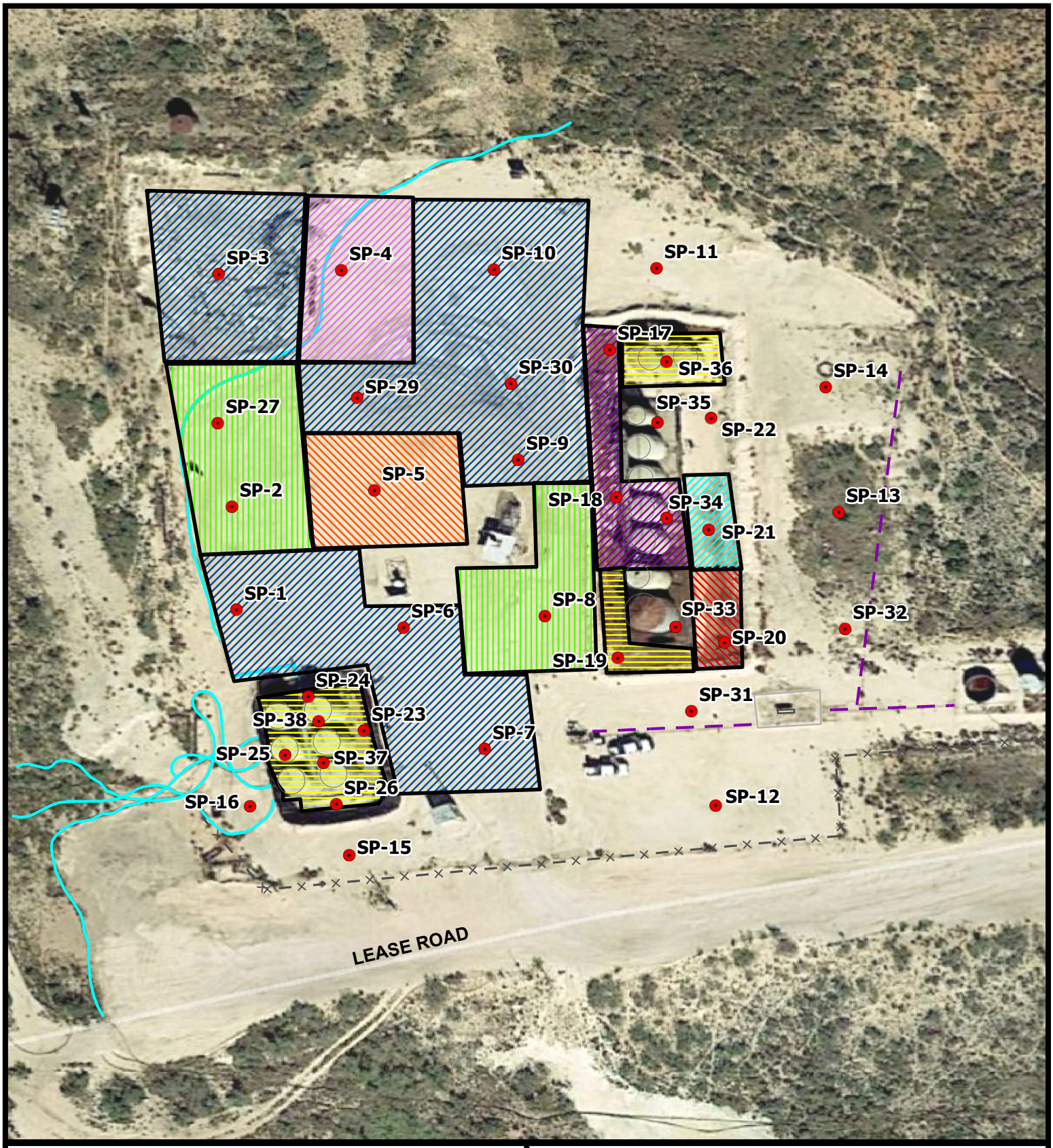
SPILL ASSESSMENT MAP
KAISER STATE SALT WATER DISPOSAL
Property Located at coordinates 32.480778°,-103.425919°
LEA COUNTY, NEW MEXICO

PERMIAN WATER SOLUTIONS LLC

Project #:
212C-MD-01742
Date: 11-7-2019

FIGURE
3

Date: 1/28/2020 Document Path: H:\GIS\PERMIAN WATER SOLUTIONS\212C-MD-01742 KAISER SWD\MXD\212C-MD-01742 KAISER SWD FIG. 3.mxd



SAMPLE POINT LOCATIONS
EXPOSED PIPELINE
BURIED PIPELINE
FENCELINE
EQUIPMENT
6"-1.0' EXCAVATED DEPTH
1.0' EXCAVATED DEPTH
4.0' EXCAVATED DEPTH
3.0' EXCAVATED DEPTH
5.0' EXCAVATED DEPTH
6.0'-7.0' EXCAVATED DEPTH
10.0' EXCAVATED DEPTH
15.0' EXCAVATED DEPTH

N
W
E
S

0 40 80
Approximate Scale in Feet

Source: "New Mexico". 32°28'50.80"N, 103°25'33.31"W. **Google Earth**. November 02,2017. November 7, 2019.

Date: 1/28/2020 Document Path: H:\GIS\PERMIAN WATER SOLUTIONS\212C-MD-01742 KAISER SWD\MXD\212C-MD-01742 KAISER SWD FIG. 4.mxd

EXCAVATED AREA & DEPTH MAP
KAISER STATE SALT WATER DISPOSAL
Property Located at coordinates 32.480778°,-103.425919°
LEA COUNTY, NEW MEXICO

PERMIAN WATER SOLUTIONS LLC

Project #:
212C-MD-01742
Date: 11-11-2019

FIGURE
4

Tables

Table 1
Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
SP-1	5/7/2019	0-1	X		<10.0	174	77.3	251	<0.050	<0.050	<0.050	<0.0150	<0.300	5,560
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.0150	<0.300	1,650
	"	4-5	X		-	-	-	-	-	-	-	-	-	1,330
	"	6-7	X		-	-	-	-	-	-	-	-	-	864
	"	9-10	X		-	-	-	-	-	-	-	-	-	656
	"	14-15	X		-	-	-	-	-	-	-	-	-	496
	"	19-20	X		-	-	-	-	-	-	-	-	-	576
	"	24-25	X		-	-	-	-	-	-	-	-	-	320
	"	29-30	X		-	-	-	-	-	-	-	-	-	144
	"	34-35	X		-	-	-	-	-	-	-	-	-	144
SP-2	5/7/2019	0-1	X		239	**2,970**	553	**3,523**	<0.050	0.372	0.760	6.36	7.49	6,530
	"	2-3	X		58.6	638	128	825	<0.050	0.068	0.193	1.63	1.89	4,960
	"	4-5	X		<50.0	346	248	594	<0.050	<0.050	<0.050	<0.0150	<0.300	2,200
	"	6-7	X		394	**14,900**	**4,740**	**20,034**	<0.050	0.068	0.717	1.67	2.46	2,160
	"	9-10	X		10.4	592	221	823	<0.050	<0.050	<0.050	<0.0150	<0.300	2,480
	"	14-15	X		-	-	-	-	-	-	-	-	-	4,640
	"	19-20	X		-	-	-	-	-	-	-	-	-	1,100
	"	24-25	X		-	-	-	-	-	-	-	-	-	448
	"	29-30	X		-	-	-	-	-	-	-	-	-	240
	"	34-35	X		-	-	-	-	-	-	-	-	-	240
SP-3	5/8/2019	0-1	X		<10.0	113	35.2	148	<0.050	<0.050	<0.050	<0.0150	<0.300	3,040
	5/13/2019	1-1.5	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.0150	<0.300	240
	"	2-2.5	X		-	-	-	-	-	-	-	-	-	240
	"	3-3.5	X		-	-	-	-	-	-	-	-	-	160
	"	4-4.5	X		-	-	-	-	-	-	-	-	-	160
	"	5-5.5	X		-	-	-	-	-	-	-	-	-	240
SP-4	5/7/2019	0-1	X		<10.0	11.6	<10.0	11.6	<0.050	<0.050	<0.050	<0.0150	<0.300	1,680
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.0150	<0.300	1,170
	"	4-5	X		-	-	-	-	-	-	-	-	-	928
	"	6-7	X		-	-	-	-	-	-	-	-	-	624
	"	9-10	X		-	-	-	-	-	-	-	-	-	464
	"	14-15	X		-	-	-	-	-	-	-	-	-	400
SP-5	5/7/2019	0-1	X		<10.0	91.4	56.8	148	<0.050	<0.050	<0.050	<0.0150	<0.300	5,040
	"	2-3	X		<50.0	522	330	852	<0.050	<0.050	<0.050	<0.0150	<0.300	784
	"	4-5	X		<10.0	401	270	671	<0.050	<0.050	<0.050	<0.0150	<0.300	368
	"	6-7	X		400	**13,800**	**4,510**	**18,710**	<0.050	0.468	1.35	2.49	4.31	224
	"	9-10	X		174	**7,720**	**2,550**	**10,444**	<0.050	0.175	0.429	1.25	1.85	224
	"	14-15	X		11.2	**1,150**	287	1,448	<0.050	<0.050	<0.050	<0.0150	<0.300	240
	"	19-20	X		<10.0	945	239	1,184	<0.050	<0.050	<0.050	<0.0150	<0.300	368
	"	24-25	X		<10.0	609	145	754	<0.050	<0.050	<0.050	<0.0150	<0.300	288
	"	29-30	X		-	-	-	-	-	-	-	-	-	64.0
	"	34-35	X		-	-	-	-	-	-	-	-	-	96.0

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Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
SP-6	5/7/2019	0-1	X		<10.0	106	46.2	152	<0.050	<0.050	<0.050	<0.0150	<0.300	5,520
	"	2-3	X		<10.0	120	51.6	172	<0.050	<0.050	<0.050	<0.0150	<0.300	2,040
	"	4-5	X		-	-	-	-	-	-	-	-	-	640
	"	6-7	X		-	-	-	-	-	-	-	-	-	640
	"	9-10	X		-	-	-	-	-	-	-	-	-	752
	"	14-15	X		-	-	-	-	-	-	-	-	-	576
	"	19-20	X		-	-	-	-	-	-	-	-	-	432
SP-7	5/7/2019	0-1	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.0150	<0.300	3,920
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.0150	<0.300	1,140
	"	4-5	X		-	-	-	-	-	-	-	-	-	1,410
	"	6-7	X		-	-	-	-	-	-	-	-	-	672
	"	9-10	X		-	-	-	-	-	-	-	-	-	768
	"	14-15	X		-	-	-	-	-	-	-	-	-	880
	"	19-20	X		-	-	-	-	-	-	-	-	-	352
	"	24-25	X		-	-	-	-	-	-	-	-	-	128
SP-8	5/7/2019	0-1	X		<10.0	284	61.1	345	<0.050	0.121	0.136	0.382	0.639	**30,000**
	"	2-3	X		<10.0	86.3	<10.0	86.3	<0.050	<0.050	<0.050	<0.0150	<0.300	10,200
	"	4-5	X		-	-	-	-	-	-	-	-	-	12,000
	"	6-7	X		-	-	-	-	-	-	-	-	-	10,400
	"	9-10	X		-	-	-	-	-	-	-	-	-	7,200
	"	14-15	X		-	-	-	-	-	-	-	-	-	4,400
	"	19-20	X		-	-	-	-	-	-	-	-	-	2,360
	"	24-25	X		-	-	-	-	-	-	-	-	-	304
	"	29-30	X		-	-	-	-	-	-	-	-	-	96.0
SP-9	5/7/2019	0-1	X		<10.0	192	118	310	<0.050	<0.050	<0.050	<0.0150	<0.300	8,660
	"	2-3	X		<10.0	10.9	<10.0	10.9	<0.050	<0.050	<0.050	<0.0150	<0.300	2,320
	"	4-5	X		-	-	-	-	-	-	-	-	-	2,760
	"	6-7	X		-	-	-	-	-	-	-	-	-	4,400
	"	9-10	X		-	-	-	-	-	-	-	-	-	3,760
	"	14-15	X		-	-	-	-	-	-	-	-	-	4,800
	"	19-20	X		-	-	-	-	-	-	-	-	-	4,560
	"	24-25	X		-	-	-	-	-	-	-	-	-	1,230
	"	29-30	X		-	-	-	-	-	-	-	-	-	528
	"	34-35	X		-	-	-	-	-	-	-	-	-	832
SP-10	5/8/2019	0-1	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,280
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	272
	"	4-5	X		-	-	-	-	-	-	-	-	-	176
SP-11	5/8/2019	0-1	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	224
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	144
	"	4-5	X		-	-	-	-	-	-	-	-	-	192
	"	6-7	X		-	-	-	-	-	-	-	-	-	96
	"	9-10	X		-	-	-	-	-	-	-	-	-	112

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			In-Situ	Removed	GRO	DRO	MRO	Total						
SP-12	5/8/2019	0-1	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	2,040
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	176
	"	4-5	X		-	-	-	-	-	-	-	-	-	800
	"	6-7	X		-	-	-	-	-	-	-	-	-	304
	"	9-10	X		-	-	-	-	-	-	-	-	-	128
	"	14-15	X		-	-	-	-	-	-	-	-	-	208
SP13	5/8/2019	0-1	X		<10.0	159	52.8	212	<0.050	<0.050	<0.050	<0.150	<0.300	288
SP-14	5/8/2019	0-1	X		<10.0	504	332	836	<0.050	<0.050	<0.050	<0.150	<0.300	640
	"	2-3	X		<10.0	100	55.6	156	<0.050	<0.050	<0.050	<0.150	<0.300	544
	"	4-5	X		-	-	-	-	-	-	-	-	-	464
	"	6-7	X		-	-	-	-	-	-	-	-	-	384
	"	9-10	X		-	-	-	-	-	-	-	-	-	288
	"	14-15	X		-	-	-	-	-	-	-	-	-	544
	"	19-20	X		-	-	-	-	-	-	-	-	-	1,960
	"	24-25	X		-	-	-	-	-	-	-	-	-	688
	"	29-30	X		-	-	-	-	-	-	-	-	-	208
	"	34-35	X		-	-	-	-	-	-	-	-	-	80.0
SP-15	5/8/2019	0-1	X		<10.0	66.4	40.6	107	<0.050	<0.050	<0.050	<0.150	<0.300	480
	"	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		-	-	-	-	-	-	-	-	-	320
	"	6-7	X		-	-	-	-	-	-	-	-	-	176
SP-16	5/8/2019	0-1	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	384
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,410
	"	4-5	X		-	-	-	-	-	-	-	-	-	1,570
	"	6-7	X		-	-	-	-	-	-	-	-	-	1,330
	"	9-10	X		-	-	-	-	-	-	-	-	-	1,170
	"	14-15	X		-	-	-	-	-	-	-	-	-	288
	"	19-20	X		-	-	-	-	-	-	-	-	-	816
SP-17	5/8/2019	0-1	X		2,130	11,200	2,010	**15,340**	<0.500	1.85	4.81	42.6	49.3	7,040
Inside Berm	"	2-3	X		16.7	463	78.3	<10.0	<0.050	<0.050	<0.050	0.214	<0.300	11,200
	"	3-4	X		-	-	-	-	-	-	-	-	-	9,600
	5/13/2019	4-4.5	X		<10.0	622	75.3	697	<0.050	0.076	<0.050	0.184	<0.300	3,760
	"	5-5.5	X		<10.0	145	<10.0	145	<0.050	<0.050	<0.050	<0.150	<0.300	9,680
BH-17	10/21/2019	0-1	X		<50.3	<10.0	<10.0	<10.0	<0.00101	<0.00101	<0.00101	0.00522	0.00522	881
	"	2-3	X		<49.9	<10.0	<10.0	<10.0	<0.00101	<0.00101	<0.00101	0.0122	0.0122	1,180
	"	4-5	X		<50.1	<50.1	<50.1	<50.1	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	1,110
	"	6-7	X		<49.8	<49.8	<49.8	<49.8	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	2,270
	"	9-10	X		<50.1	<50.1	<50.1	<50.1	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	1,050
	"	14-15	X		<50.1	<50.1	<50.1	<50.1	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	1,520
	"	19-20	X		<50.2	<50.2	<50.2	<50.2	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	1,710
	"	24-25	X		<49.8	<49.8	<49.8	<49.8	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	937
	"	29-30	X		<50.2	<50.2	<50.2	<50.2	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	404

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			In-Situ	Removed	GRO	DRO	MRO	Total						
SP-18	5/7/2019	0-1	X		**1,950**	**8,290**	1,320	**11,560**	0.883	20.6	9.44	60.9	**91.8**	9,730
Inside Berm	"	2-3	X		177	**1,990**	506	**2,673**	<0.050	0.124	0.430	1.06	1.61	5,520
BH-18	10/21/2019	0-1	X		<251	**11,100**	1,640	**12,700**	<0.101	<0.101	0.196	0.965	1.16	7,190
	"	2-3	X		**444**	**6,210**	747	**7,400**	<0.100	0.279	0.594	1.73	2.61	6,180
	"	4-5	X		<49.9	183	<49.9	183	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	8,280
	"	6-7	X		<50.2	<50.2	<50.2	<50.2	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	5,540
	"	9-10	X		<50.3	<50.3	<50.3	<50.3	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	3,010
	"	14-15	X		<49.8	<49.8	<49.8	<49.8	<0.000984	<0.000984	<0.000984	<0.000984	<0.000984	1,610
	"	19-20	X		<50.0	<50.0	<50.0	<50.0	<0.000986	<0.000986	<0.000986	<0.000986	<0.000986	4,720
	"	24-25	X		<49.8	<49.8	<49.8	<49.8	<0.000986	<0.000986	<0.000986	0.00348	0.00348	2,630
	"	29-30	X		<49.7	<49.7	<49.7	<49.7	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	1,250
	"	34-35	X		<50.0	<50.0	<50.0	<50.0	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	1,120
	"	39-40	X		<50.1	<50.1	<50.1	<50.1	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	772
	"	44-45	X		<50.0	<50.0	<50.0	<50.0	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	633
	"	49-50	X		<49.9	<49.9	<49.9	<49.9	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	388
SP-19	5/8/2019	0-1	X		2,980	14,800	2,930	**20,710**	3.95	46.4	9.53	71.3	**131**	6,560
Inside Berm	"	2-3	X		64.8	786	176	**1,027**	<0.050	0.143	0.191	0.451	0.784	12,800
	5/13/2019	4-4.5	X		2,270	7,380	805	**10,455**	2.21	48.5	36.9	131	**219**	4,120
BH-19	10/22/2019	0-1	X		474	8,050	729	**9,250**	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	4,160
	"	2-3	X		97.5	2,900	253	**3,250**	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	9,700
	"	4-5	X		87.1	2,090	186	**2,360**	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	10,200
	"	6-7	X		<50.2	<50.2	<50.2	<50.2	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	7,660
	"	9-10	X		<49.9	<49.9	<49.9	<49.9	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	10,300
	"	14-15	X		<49.8	<49.8	<49.8	<49.8	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	9,650
	"	19-20	X		<49.8	<49.8	<49.8	<49.8	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	11,500
	"	24-25	X		<50.0	<50.0	<50.0	<50.0	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	811
	"	29-30	X		<50.0	<50.0	<50.0	<50.0	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	502
	"	34-35	X		<49.8	<49.8	<49.8	<49.8	<0.000982	0.00182	<0.000982	<0.000982	0.00182	171
	"	39-40	X		<49.9	<49.9	<49.9	<49.9	<0.000986	<0.000986	<0.000986	<0.000986	<0.000986	495
SP-20	5/8/2019	0-1	X		3,520	25,300	6,040	**34,860**	**21.7**	80.8	17.3	61.2	**181**	2,520
Inside Berm	"	2-3	X		2,930	13,400	2,870	**19,200**	**15.3**	73.7	15.0	101	**205**	1,630
	5/13/2019	4-4.5	X		3,900	11,300	1,620	**16,820**	**15.3**	102	49.2	162	**329**	1,550
	"	5-5.5	X		4,390	11,300	1,390	**17,080**	**18.0**	120	56.6	153	**348**	1,600
BH-20	10/22/2019	0-1	X		302	3,560	339	**4,200**	0.00241	0.0227	0.0126	0.0558	0.0935	2,680
	"	2-3	X		821	4,840	396	**6,060**	0.5700	7.56	4.92	24.4	37.4	5,240
	"	4-5	X		1,270	4,990	395	**6,660**	2.00	22.2	13.0	51.7	**88.9**	2,300
	"	6-7	X		2,110	6,650	588	**9,350**	3.32	34.0	18.5	63.2	**119**	218
	"	9-10	X		388	2,710	189	**3,290**	<0.0998	2.33	3.07	10.7	16.1	988
	"	14-15	X		<50.2	365	<50.2	365	<0.00101	<0.00101	0.0126	0.0659	0.0785	3,800
	"	19-20	X		<50.3	326	57.1	385	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	1,350
	"	24-25	X		<50.1	62.8	<50.1	62.8	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	199
	"	29-30	X		<50.0	72.7	<50.0	72.7	<0.00101	<0.00101	<0.00101	0.0404	0.0404	208

Table 1
Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
SP-21	5/8/2019	0-1	X		993	10,500	2,100	**13,593**	0.0740	2.12	2.05	14.3	18.5	2,240
Inside Berm	"	2-3	X		10.6	445	109	565	<0.050	<0.050	<0.050	0.241	<0.300	1,100
	5/13/2019	4-4.5	X		<10.0	725	57.2	782	<0.050	0.076	<0.050	<0.150	<0.300	3,120
	"	5-5.5	X		<10.0	215	<10.0	215	<0.050	<0.050	<0.050	<0.150	<0.300	2,200
SP-22	5/8/2019	0-1	X		<10.0	64.0	52.9	117	<0.050	<0.050	<0.050	<0.150	<0.300	880
Inside Berm	"	2-3	X		<10.0	32.0	16.4	48.4	<0.050	<0.050	<0.050	<0.150	<0.300	752
	5/13/2019	3-3.5	X		-	-	-	-	-	-	-	-	-	720
	"	4-4.5	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	848
SP-23	5/8/2019	0-1	X		593	12,800	2,390	**15,190**	<0.050	1.03	1.03	2.56	4.62	880
Inside Berm	5/14/2019	1-1.5	X		2,180	7,770	1,050	**11,000**	6.76	71.1	40.4	129	**247**	464
	"	2-2.5	X		97.7	662	48.8	809	1.06	5.98	5.38	17.6	30.0	3,680
	"	3-3.5	X		902	3,150	521	**4,573**	7.38	57.8	31.7	100	**197**	1,060
	"	4-4.5	X		2,760	9,000	1,170	**12,930**	14.2	112	50.7	150	**327**	2,760
BH-23	10/22/2019	0-1	X		407	3,250	258	**3,920**	0.0125	0.0446	0.0375	1.04	1.14	372
	"	2-3	X		664	3,060	209	**3,930**	0.0152	0.0333	0.0821	0.355	0.486	178
	"	4-5	X		1,050	4,150	338	**5,540**	0.394	0.374	0.232	1.02	2.02	55.9
	"	6-7	X		74.5	742	76.9	893	0.0108	0.307	0.400	1.02	1.73	39.2
	"	9-10	X		<49.9	<49.9	<49.9	<49.9	0.00949	0.0698	0.138	0.392	0.609	359
	"	14-15	X		63.9	672	78.3	814	0.00230	0.0821	0.128	0.491	0.703	3,960
	"	19-20	X		<50.2	<50.2	<50.2	<50.2	<0.000994	0.00456	0.00189	0.00794	0.0144	6,740
	"	24-25	X		<50.3	<50.3	<50.3	<50.3	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	3,200
	"	29-30	X		<50.0	<50.0	<50.0	<50.0	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	2,370
	"	34-35	X		<49.9	<49.9	<49.9	<49.9	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	1,330
	"	39-40	X		<50.1	<50.1	<50.1	<50.1	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	1,350
	"	44-45	X		<50.0	<50.0	<50.0	<50.0	<0.000986	<0.000986	<0.000986	<0.000986	<0.000986	941
	"	49-50	X		<50.1	<50.1	<50.1	<50.1	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	362
	"	54-55	X		<50.0	<50.0	<50.0	<50.0	0.00260	0.00806	0.00849	0.0294	0.0486	286
SP-24 (Inside Berm)	5/8/2019	0-1	X		595	11,000	2,060	**13,060**	1.49	12.1	2.69	16.2	32.5	1,060
BH-24	10/22/2019	0-1	X		561	4,810	411	**5,780**	0.00859	0.8070	1.32	5.05	7.19	598
	"	2-3	X		1,160	4,830	405	**6,400**	0.380	7.47	5.41	14.2	27.5	722
	"	4-5	X		92.8	827	119	1,040	0.0189	0.335	0.266	0.986	1.61	297
	"	6-7	X		<49.8	220	67	287	<0.000994	0.00366	0.00411	0.0128	0.0206	4,460
	"	9-10	X		<49.8	166	<49.8	166	<0.000998	0.00218	0.00766	0.0276	0.0374	3,530
	"	14-15	X		<49.8	289	<49.8	289	<0.000994	<0.000994	0.00849	0.0366	0.0451	598
	"	19-20	X		<50.2	227	<50.2	227	<0.00100	<0.00100	0.0109	0.0388	0.0497	581
	"	24-25	X		<50.3	<50.3	<50.3	<50.3	<0.00100	<0.00100	<0.00100	0.00563	0.00563	494
	"	29-30	X		<50.1	<50.1	<50.1	<50.1	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	247

Table 1
Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
SP-25	5/8/2019	0-1	X		2,440	12,100	1,690	**13,790**	9.63	68.7	35.1	79.0	**192**	4,880
Inside Berm	5/14/2019	1-1.5	X		1,610	5,200	944	**7,754**	2.14	32.7	25.7	64.9	**125**	4,320
	"	2-2.5	X		85.1	450	65.6	601	0.397	5.74	5.26	15.2	26.6	1,150
	"	3-3.5	X		18.9	150	19.0	188	0.052	0.729	0.825	2.42	4.03	2,440
	"	4-4.5	X		39.2	398	154	591	<0.050	0.313	0.430	1.23	1.97	2,960
	"	5-5.5	X		<10.0	552	242	794	<0.050	<0.050	0.098	0.234	0.332	1,360
BH-25	10/22/2019	0-1	X		<49.9	223	<49.9	223	0.0160	0.281	0.283	0.752	1.33	5,200
	"	2-3	X		1,220	3,730	289	**5,240**	0.6600	8.86	5.73	13.3	28.6	5,200
	"	4-5	X		1,140	3,820	303	**5,260**	6.40	58.6	38.6	90.0	**194**	4,510
	"	6-7	X		<50.1	<50.1	<50.1	<50.1	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	1,460
	"	9-10	X		<50.1	<50.1	55.7	55.7	<0.00102	<0.00102	<0.00102	0.0119	0.0119	1,470
	"	14-15	X		<50.1	<50.1	<50.1	<50.1	<0.00100	0.0374	0.0628	0.188	0.288	805
	"	19-20	X		<50.0	<50.0	<50.0	<50.0	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	563
	"	24-25	X		<50.2	58.9	<50.2	58.9	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	349
SP-26 (Inside Berm)	5/8/2019	0-1	X		1,090	12,200	2,020	**14,220**	<0.050	1.34	1.33	4.02	6.69	640
BH-26	10/22/2019	0-1	X		795	4,560	405	**5,760**	<000994	<000994	<000994	<000994	<000994	8,630
	"	2-3	X		1,050	4,040	288	**5,380**	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	11,500
	"	4-5	X		1,280	4,860	386	**6,530**	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	7,370
	"	6-7	X		<50.1	428	62.9	491	0.00825	0.0797	0.0637	0.203	0.355	5,300
	"	9-10	X		<50.2	383	77.7	461	0.0149	0.151	0.109	0.380	0.655	3,060
	"	14-15	X		<50.3	<50.3	<50.3	<50.3	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	3,080
	"	19-20	X		<50.1	<50.1	<50.1	<50.1	<0.00101	<0.00101	<0.00101	0.00130	0.00130	769
	"	24-25	X		<50.3	<50.3	<50.3	<50.3	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	529
	"	29-30	X		<50.3	<50.3	<50.3	<50.3	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	347
	"	34-35	X		<50.2	<50.2	<50.2	<50.2	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	325
SP-27	5/8/2019	0-1	X		<10.0	14.5	<10.0	15.0	<0.050	<0.050	<0.050	<0.150	<0.300	2,440
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,340
	"	4-5	X		<10.0	938	244	**1,182**	<0.050	<0.050	<0.050	<0.150	<0.300	448
	"	6-7	X		<100	5,680	1,170	**6,850**	<0.050	0.0550	0.342	0.779	1.18	208
	"	9-10	X		<10.0	80.6	<10.0	81.0	<0.050	<0.050	<0.050	<0.150	<0.300	208
	"	14-15	X		<10.0	206	29.2	235	<0.050	<0.050	<0.050	<0.150	<0.300	272
	"	19-20	X		<10.0	93.2	12.9	106	<0.050	<0.050	<0.050	<0.150	<0.300	704
	"	24-25	X		<10.0	19.0	<10.0	19.0	<0.050	<0.050	<0.050	<0.150	<0.300	176
	"	29-30	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	128
	"	34-35	X		-	-	-	-	-	-	-	-	-	112
	"	39-40	X		-	-	-	-	-	-	-	-	-	80.0

Table 1
Permian Water Solutions
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Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
SP-29	5/8/2019	0-1	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,070
	"	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		-	-	-	-	-	-	-	-	-	160
	"	6-7	X		-	-	-	-	-	-	-	-	-	48.0
SP-30	5/8/2019	0-1	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	5,120
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,330
	"	4-5	X		-	-	-	-	-	-	-	-	-	1,490
	"	6-7	X		-	-	-	-	-	-	-	-	-	682
	"	9-10	X		-	-	-	-	-	-	-	-	-	704
	"	14-15	X		-	-	-	-	-	-	-	-	-	256
SP-31	5/8/2019	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	64.0
	"	4-5	X		-	-	-	-	-	-	-	-	-	80.0
SP-32	5/8/2019	0-1	X		<10.0	35.3	22.7	58.0	<0.050	<0.050	<0.050	<0.150	<0.300	144
	"	2-3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	512
	"	4-5	X		-	-	-	-	-	-	-	-	-	832
BH-33	10/22/2019	0-1	X		<49.8	<49.8	<49.8	<49.8	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	1,360
	"	2-3	X		<49.7	<49.7	<49.7	<49.7	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	781
	"	4-5	X		<50.1	<50.1	<50.1	<50.1	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	1,080
	"	6-7	X		<50.2	<50.2	<50.2	<50.2	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	772
	"	9-10	X		<50.2	<50.2	<50.2	<50.2	<0.000982	<0.000982	<0.000982	<0.000982	<0.000982	446
	"	14-15	X		<50.1	<50.1	<50.1	<50.1	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	287
	"	19-20	X		<49.9	<49.9	<49.9	<49.9	<0.000984	<0.000984	<0.000984	<0.000984	<0.000984	399
BH-34	10/21/2019	0-1	X		1,470	8,110	638	**10,200**	0.00130	0.0246	0.0423	0.133	0.201	290
	"	2-3	X		1,140	5,310	449	**6,900**	0.00256	0.0498	0.0643	0.202	0.319	522
	"	4-5	X		81.3	869	132	1,080	<0.00100	0.00337	0.00622	0.0198	0.0294	1,080
	"	6-7	X		<50.2	165	55.9	221	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	112
	"	9-10	X		<50.2	<50.2	<50.2	<50.2	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	209
	"	14-15	X		<50.2	<50.2	<50.2	<50.2	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	480
	"	19-20	X		<50.1	<50.1	<50.1	<50.1	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	2,440
	"	24-25	X		<50.3	<50.3	<50.3	<50.3	<0.00100	<0.00100	<0.00100	0.0102	0.0102	2,260
	"	29-30	X		<50.2	<50.2	<50.2	<50.2	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	741
	"	34-35	X		<50.0	<50.0	<50.0	<50.0	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	805
	"	39-40	X		<50.2	<50.2	<50.2	<50.2	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	957

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			In-Situ	Removed	GRO	DRO	MRO	Total						
BH-35	10/21/2019	0-1	X		<50.1	<50.1	<50.1	<50.1	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	1,660
	"	2-3	X		<49.9	917	100	1,020	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	2,860
	"	4-5	X		<50.0	502	78.3	580	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	1,120
	"	6-7	X		<49.7	<49.7	<49.7	<49.7	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	3,340
	"	9-10	X		<49.8	<49.8	<49.8	<49.8	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	3,180
	"	14-15	X		<49.8	<49.8	<49.8	<49.8	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	3,990
	"	19-20	X		<50.2	<50.2	<50.2	<50.2	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	6,730
	"	24-25	X		<50.0	53.0	<50.0	53.0	<0.000998	<0.000998	<0.000998	0.00166	0.00166	1,790
	"	29-30	X		<49.8	<49.8	<49.8	<49.8	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	190
	"	34-35	X		<49.8	<49.8	<49.8	<49.8	<0.000986	<0.000986	<0.000986	<0.000986	<0.000986	523
	"	39-40	X		<49.8	<49.8	<49.8	<49.8	<0.000986	<0.000986	<0.000986	<0.000986	<0.000986	502
BH-36	10/21/2019	0-1	X		1,210	7,730	691	**9,630**	<0.0101	0.135	2.57	10.8	13.5	5,900
	"	2-3	X		<50.1	588	122	710	<0.0996	1.30	1.14	13.4	15.8	7,660
	"	4-5	X		<50.3	<50.3	<50.3	<50.3	<0.00100	<0.00100	<0.00100	0.00311	0.00311	13,000
	"	6-7	X		<50.0	109	50.1	159	<0.00100	<0.00100	<0.00100	0.0184	0.0184	7,410
	"	9-10	X		<50.3	<50.3	<50.3	<50.3	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	2,060
	"	14-15	X		<50.2	<50.2	<50.2	<50.2	<0.00101	<0.00101	<0.00101	0.00186	0.00186	112
	"	19-20	X		<50.0	<50.0	<50.0	<50.0	<0.00100	0.00106	<0.00100	0.0143	0.0154	1,040
SP-37 (Inside Berm)	1/13/2020	0-1	X		886	4,130	382	**5,400**	0.283	0.436	0.258	6.62	7.60	3,040
	"	2-3	X		1,170	3,230	301	**4,700**	0.642	21.20	7.33	21.5	**50.7**	3,200
	"	4-5	X		1,730	4,130	397	**6,260**	0.209	9.64	36.8	131	**178**	4,810
	"	6-7	X		<50.0	224	<50.0	224	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	4,930
	"	9-10	X		<49.9	77.3	<49.9	77.3	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	1,170
	"	14-15	X		<49.8	93.1	<49.8	93.1	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	542
	"	19-20	X		<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	144
	"	24-25	X		<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	49.0
SP-38 (Inside Berm)	1/13/2020	0-1	X		406	4,410	472	**5,290**	0.101	0.142	0.130	3.20	3.57	2,160
	"	2-3	X		1,060	3,250	304	**4,610**	0.815	11.8	5.80	21.3	39.7	6,130
	"	4-5	X		1,550	5,330	486	**7,340**	1.19	15.5	9.86	24.5	**51.0**	6,120
	"	6-7	X		<49.9	233	<49.9	233	<0.00198	<0.00198	0.00484	0.0240	0.0289	812
	"	9-10	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	877
	"	14-15	X		<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	943
	"	19-20	X		<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	343
	"	24-25	X		<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	300
	"	29-30	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	200
	"	34-35	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	162

Photos

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View Southwest – Area of SP-1

View South – Area of SP-2

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View North – Area of SP-3

View West – Area of SP-4

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View South – Area of SP-5

View East – Area of SP-6

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View East – Area of SP-7

View Northwest – Area of SP-8

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View Northwest – Area of SP-9

View West – Area of SP-10

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View South – Area of SP-11

View North – Area of SP-12

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View Northwest – Area of SP-13

View Southwest – Area of SP-14

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View West – Area of SP-15

View East – Area of SP-16

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View Northwest – Area of SP-17

View South – Area of SP-18

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View South – Area of SP-19

View South – Area of SP-20

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View North – Area of SP-21

View South – Area of SP-22

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View East – Area of SP-24

View North – Area of SP-25

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View West – Area of SP-26

View West – Area if SP-27

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View North – Area of SP-29

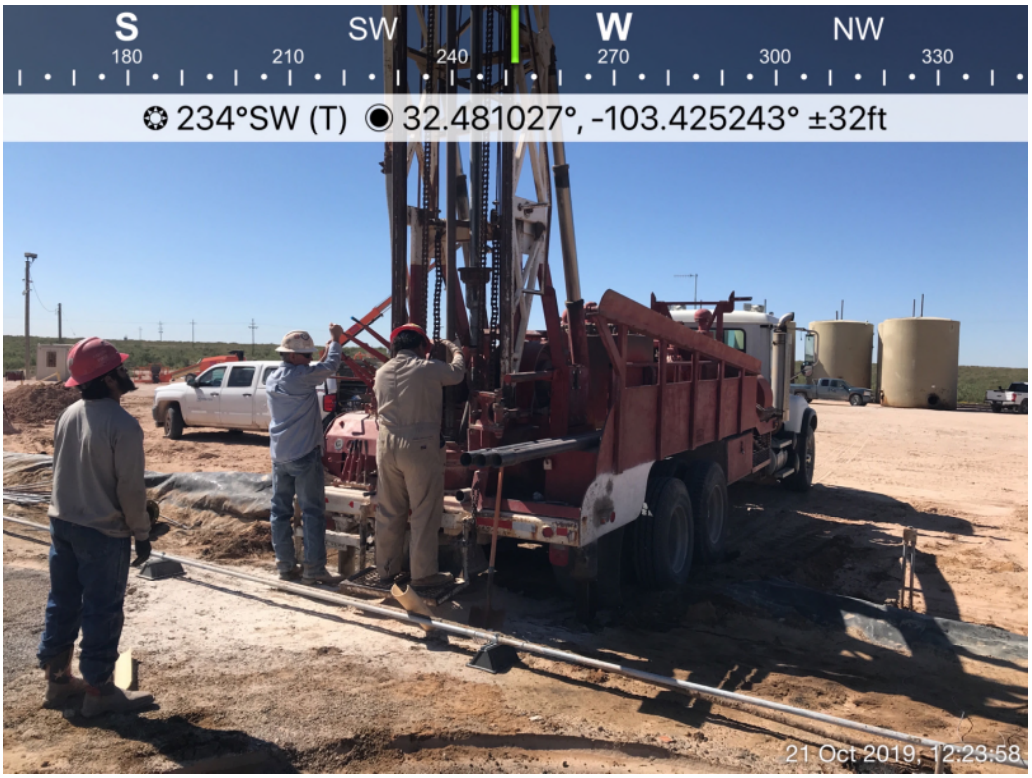
View South – Area of SP-30

Permian Water Solutions
Kaiser SWD
Lea County, New Mexico

View North – Area of SP-31

View North – Area of SP-32

Permian Water Solutions
Kaiser State SWD
Lea County, New Mexico



View Southwest – Area of BH-17

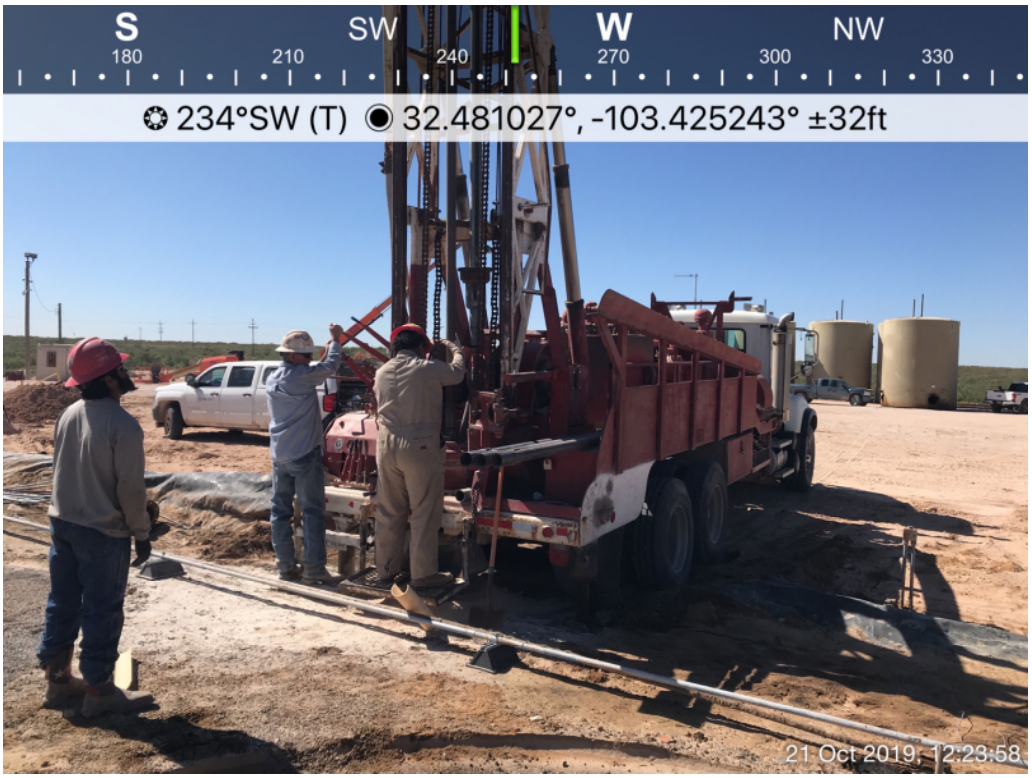
View Northeast – Areas of BH-18 and BH-19

Permian Water Solutions
Kaiser State SWD
Lea County, New Mexico

View Southeast – Area of BH-20

View Southwest – Areas of BH-23, BH-24, BH-25, and BH-26

Permian Water Solutions
Kaiser State SWD
Lea County, New Mexico



View Southwest – Area of BH-17

View Northeast – Areas of BH-18 and BH-19

Permian Water Solutions
Kaiser State SWD
Lea County, New Mexico

View Southeast – Area of BH-20

View Southwest – Areas of BH-23, BH-24, BH-25, and BH-26

Permian Water Solutions
Kaiser State SWD
Lea County, New Mexico

View South – Areas of BH-33 and BH-34

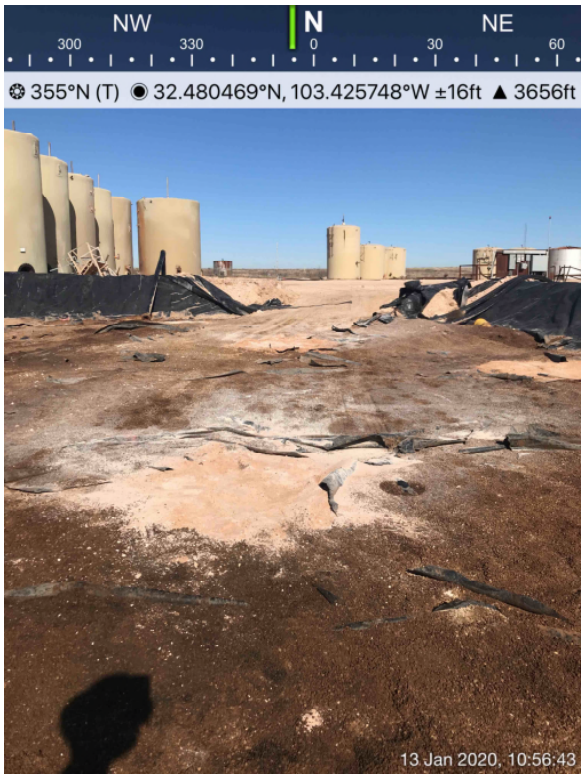
View South – Area of BH-35

Permian Water Solutions
Kaiser State SWD
Lea County, New Mexico

View Southeast – Area of BH-36

Permian Water Solutions
Kaiser State SWD
Lea County, New Mexico

View South – Areas SP-37 and SP-38



View North – Areas of SP-37 and SP-38

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Pyote Water Systems, LLC	Contact Jerry Burton Operations Manager for NM
Address 400 W Illinois STE 950 Midland TX	Telephone No. 432-448-4917
Facility Name	Facility Type Production Water

Surface Owner Pyote Water Systems,LLC	Mineral Owner Pyote	API No. 30-025-02538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	25	34	10 ft	N/S			LEA COUNTY

Latitude 32.480855153405 5 Longitude -103.425630765566

NATURE OF RELEASE

Type of Release 20 bbls production water	Volume of Release 20 bbls	Volume Recovered 20 bbls
Source of Release Vac truck	Date and Hour of Occurrence 1/14/15	Date and Hour of Discovery 1/14/15
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jerry Burton NM OM	
By Whom? Jerry Burton	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. none	

If a Watercourse was Impacted, Describe Fully.*
none

Describe Cause of Problem and Remedial Action Taken.*
Vac truck over filled the sumps~/ he failed to suck it out when they are instructed to do on each load. It is posted as well, at the sign in ticket area also

Describe Area Affected and Cleanup Action Taken.* The clean up area or remediation took place on 1/16/15, cleaned up the area with backhoe, brought in caliche and the remeditation is done. Load lines 3&4 been shut down for about 4 months, the access water is from all the rain back n September and October,than the snow we have had since than. Has not been dry enough to work on those lines. DUE TO MOTHER NATURE we have had a company go out several times to do this for loads line 3 & 4

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: Jerry Burton	OIL CONSERVATION DIVISION
Printed Name: Jerry Burton	Approved by Environmental Specialist:
Title: Operations Manager for NM	Approval Date: 1/29/15 Expiration Date: 3/29/15
E-mail Address: audra@pyotewatersystems.com	Conditions of Approval: Site samples required. Deliniate and remediate as per NMOCD guides. Submit final C-141 by 3 Attached ☐ 1RP-3512
Date: 1-23-15 Phone: 432-448-4917	294873 nTO1502927174 pTO1502927423

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

xxx **Initial Report** ☐ **Final Report**

Name of Company PYOTE WATER SYSTEMS, LLC	***Contact Jerry Burton NM Operations Manager***
Address 400 W. Illinois Ste 900	***Telephone No. 432.448.4917 or 432.448.5323(Audra)***
Facility Name Kaiser SWD	***Facility Type SWD- production water DIDPOSAL***

Surface Owner Pyote Water Systems, LLC	*Mineral Owner Pyote Water Systems, LLC*	*API No. 30-025-02538*

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	21	34	125 ft			E/W	*Lea COUNTY*

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release; ***production water***	Volume of Release *100BBLS*	Volume Recovered *100 BBLS*
Source of Release ***Vac truck (unknown due to no camera's) hit load line 3***	Date and Hour of Occurrence ***4/24/2015***	Date and Hour of Discovery ***4/24/15 2:35 am***
Was Immediate Notice Given **X Yes** ☐ No ☐ Not Required	If YES, To Whom? ***Jerry Burton***	
By Whom? ***Unknown driver (575)-390-3836***	Date and **HOUR;** ***4/24/2015 2:35 am***	
Was a Watercourse Reached? ☐ Yes ****** No******	If YES, Volume Impacting the Watercourse.	

RECEIVED
By OCD District 1 at 11:10 am, Apr 30, 2015

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* ***unknown truck driver hit load line 3 caused a spill. We had an anonymous driver call us at 2:35 am (575)390-3836 in the morning, upon his arrival he noticed a large amount of water on the pad at the location, than noticed line 3 was had been hit. He did not see this happen at the Kaiser***

Describe Area Affected and Cleanup Action Taken.*
Area affected was the pad only at the location. Jerry and his pumper Kenny repaired damages themselves, remedial work done by L&J services (backhoe) 2 vac trucks one from Big Buck Services and one from BT Services

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:
Printed Name: ***Jerry Burton***
Title: ***NM Operations Manager for Pyote Water systems, LLC***
jerry@pyotewatersystems.com or audra@pyotewatersystems.com
E-mail Address:
4-26-2015
Date: 4/26/15 Phone:432.448.4917

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 04/30/2015 Expiration Date: 07/30/2015

Conditions of Approval:
Site samples required. Delineate and remediate as per MNOCD guides. Geotag photographs of remediation required.

Attached ☐ 294873
1RP 3621

pKJ1512042374
nKJ1512041707

* Attach Additional Sheets If Necessary

District I
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District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural

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

RECEIVED
By JKeyes at 7:43 am, Jun 09, 2016

Form C-141

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Pyote Water Systems,LLC	Contact Jerry Burton
Address 400 W Illinois Ste 900 MIDLAND TX 79701	Telephone No. 432-448-4917
Facility Name Kaiser Swd	Facility Type production Water

Surface Owner STATE	Mineral Owner STATE	API No. 30-025-02538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	21s	~~24s~~ 34E					LEA COUNTY

Latitude 32.4808578- **Longitude** 103.4256592 nad 83

NATURE OF RELEASE

Type of Release lightning struck load tanks while driver was unloading	Volume of Release 1050 BBLS	Volume Recovered 1050 bbls
Source of Release production water	Date and Hour of Occurrence 5-17-16	Date and Hour of Discovery 4 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? JERRY BURTON via telephone by driver	
By Whom? UNKNOWN DRIVER	Date and Hour 5/17/16 4PM	
Was a Watercourse Reached? ☒ Yes ☐ No	If YES, Volume Impacting the Watercourse. 1050 BLS	

If a Watercourse was Impacted, Describe Fully.*

fire melted parts of the liner,water got under the liner

Describe Cause of Problem and Remedial Action Taken.*

lightining hit load tanks and burned 6 500 bbl tanks less than 2 bbls breeched containment. called vac truck out to empty containment after the fire dept put out the fire .

Describe Area Affected and Cleanup Action Taken.*

load side containment have clean up crew cleaning up and disposing of old tanks and cat walk to sundown

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: Jerry Burton

Printed Name: Jerry Burton

Title: NM Operations Mgr

E-mail Address: jerry@pyotewatersystems.com

Date: 5-18-2016 Phone: 4324484917

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Jamie Kleyn

Approval Date: 06/09/2016 Expiration Date: 08/09/2016

Conditions of Approval:
Discrete samples only. Delineate and remediate per NMOCD guidelines.

Attached ☐
1RP 4305

* Attach Additional Sheets If Necessary

nJXK1616127644
pJXK1616127747

District I
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District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

HOBBS OCD
NOV 18 2016
RECEIVED

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Cambrian Management, LTD.	Contact: Mike Anthony
Address: 415 W. Wall St. Suite 900	Telephone No. 432-631-4398
Facility Name: Kaiser SWD #9	Facility Type: SWD

Surface Owner: State	Mineral Owner: State	API No. 30-025-02538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	21S	34E	1980	North	1980	West	Lea

Latitude 32.4808578 Longitude -103.4256592

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: 0
Source of Release: Frac tanks	Date and Hour of Occurrence:	Date and Hour of Discovery:
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Due to a lightning strike on the tank battery fluid was transferred into temporary frac tanks to continue operations during reconstruction. The frac tanks leaked resulting in the release of an unknown quantity of fluid. The frac tanks have been removed from the location.

Describe Area Affected and Cleanup Action Taken.*
The frac tanks were set on the north side of the affected battery. The fluid from the leak flowed south around the battery berm and continued south-southwest into the pasture. Soil samples will be taken in preparation for a remediation work plan.

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: Mike Anthony

Printed Name: Mike Anthony

Title: Field Operations Superintendent

E-mail Address: manthony@cambrianmgmt.com

Date: 11/15/16 Phone: 432-631-4398

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Kristen Lynch

Approval Date: 11/23/2016 Expiration Date: 01/23/2017

Conditions of Approval:
Please see attached Directive

Attached ☐

1RP 4525
nKL1632848695
pKL1632848917

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☑ Initial Report ☐ Final Report

Name of Company Cambrian Management, Ltd.	Contact Mike Anthony
Address P.O. Box 272, Midland, TX 79702	Telephone No. (432)631-4398
Facility Name Kaiser State SWD	Facility Type Salt Water Disposal

Surface Owner State	Mineral Owner State	API No. 30-025-02538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	21S	34E					Lea

Latitude 32.48008578 **Longitude** -103.4256592 NAD83

NATURE OF RELEASE

Type of Release Produced Water & Crude Oil	Volume of Release 50 bbls	Volume Recovered 0 bbls
Source of Release Unknown	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 10/18/2017, 12:35 PM
Was Immediate Notice Given? ☐ Yes ☑ No ☐ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☑ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 4:17 pm, Oct 27, 2017

Describe Cause of Problem and Remedial Action Taken.*

The cause of the release is undetermined and is currently under investigation. No remedial action has been taken at this point.

Describe Area Affected and Cleanup Action Taken.*

The release was confined to the primary and secondary earthen containment berms surrounding the SWD battery. The affected area inside the berms measured approximately 7,200 sq. ft. Remediation of the impacted area will be conducted in accordance with NMOCD and NMSLO guidelines.

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
Denise Jones- Regulatory Analyst

Printed Name: Todd Roberson (as agent of Cambrian Mgmt.)

Title: Owner

E-mail Address: todd@trinityoilfieldservices.com

Date: 10/23/2017 Phone: (575) 631-3129

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: gy

Approval Date: 10/27/2017 Expiration Date:

Conditions of Approval: see attached directive

Attached ☑

* Attach Additional Sheets If Necessary

1RP-4855 nOY1730058924 pOY1730059151

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☑ Initial Report ☐ Final Report

Name of Company Cambrian Management, Ltd.	Contact Mike Anthony
Address P.O. Box 272, Midland, TX 79702	Telephone No. (432)631-4398
Facility Name Kaiser State SWD	Facility Type Salt Water Disposal

Surface Owner State	Mineral Owner State	API No. 30-025-02538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	21S	34E					Lea

Latitude 32.48008578 **Longitude** -103.4256592 NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 20 bbls	Volume Recovered 10 bbls
Source of Release Seal on pump	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 1/31/2018, 10:00 AM
Was Immediate Notice Given? ☐ Yes ☑ No ☐ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☑ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 9:34 am, Feb 07, 2018

Describe Cause of Problem and Remedial Action Taken.*

The seal on a pump failed. A vacuum truck was utilized to recover free-standing liquid. The seal was repaired during initial response activities.

Describe Area Affected and Cleanup Action Taken.*

The release was confined to the primary and secondary earthen containment berms surrounding the SWD battery. The affected area inside the berms measured approximately 5,000 sq. ft. The release commingled with an area that had been affected by a release on 10/18/2017 (see 1RP-4855). Remediation of the impacted area will be conducted in accordance with NMOCD and NMSLO guidelines.

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	Approved by Environmental Specialist:
Title: Regulatory Analyst	Approval Date: 2/7/2018 Expiration Date:
E-mail Address: djones@cambrianmgmt.com	Conditions of Approval: see attached directive Attached ☑
Date: 2/6/18 Phone: (432) 620-9181	

* Attach Additional Sheets If Necessary

1RP-4960

nOY1803834027

pOY1803834550

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☐ Final Report

Name of Company Cambrian Management, Ltd.	Contact Mike Anthony
Address PO Box 272, Midland TX 79702	Telephone No . 432-631-4398
Facility Name Kaiser State SWD	Facility Type SWD

Surface Owner State	Mineral Owner State	API No. 30-025-02538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	21S	34E					Lea

Latitude 32.4808578 **Longitude** -103.4256592 NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 150 bbls	Volume Recovered 150 bbls
Source of Release Wellhead	Date and Hour of Occurrence 06/20/2018	Date and Hour of Discovery 06/20/2018 10:00AM
Was Immediate Notice Given? ☐ Yes X No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Nipple on wellhead broke off – nipple was replaced

Describe Area Affected and Cleanup Action Taken.*
All water was contained to the caliche pad. All water was picked up. This was on top of a previous spill that was already reported and is in the process to be remediated.

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:	OIL CONSERVATION DIVISION
Printed Name: Denise Jones	Approved by Environmental Specialist: BH
Title: Regulatory Analyst	Approval Date: 7/31/2018 Expiration Date:
E-mail Address: djones@cambrianmgmt.com	Conditions of Approval: See attached directive Attached ☑
Date: 06/21/2018 Phone:	

1RP-5139 pCH1821239860
nCH1821239639

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

X Initial Report ☐ Final Report

Name of Company Cambrian Management, Ltd	Contact Andy Rickard
Address PO Box 272, Midland, TX 79702	Telephone No. 432-620-9181
Facility Name Kaiser State SWD	Facility Type SWD

Surface Owner State	Mineral Owner State	API No. 30-025-02538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	21S	34E	1980	North	1980	West	Lea

Latitude 32.480938 N___ Longitude -103.425227____ NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 200 Bbls	Volume Recovered 200 Bbls
Source of Release Valve	Date and Hour of Occurrence 08/06/2018	Date and Hour of Discovery 08/06/2018 10:00AM
Was Immediate Notice Given? X Yes ☐ No ☐ Not Required	If YES, To Whom? Christina Hernandez	
By Whom? Denise Jones	Date and Hour 08/06/2018 3:25 PM	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 1:48 pm, Aug 07, 2018

Describe Cause of Problem and Remedial Action Taken.*
Valve Malfunction/Power Failure
Sometimes when the transfer pump comes on while the injection pump is on, a fuse blows on high current. We are having an electrician look at turning up the voltage at the transformers to lower peak current.

Describe Area Affected and Cleanup Action Taken.*

Only the area inside the berm which is lined with plastic was affected. All water was vacuumed up.

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Signature: Denise Jones

Printed Name: Denise Jones

Title: Regulatory Analyst

E-mail Address: djones@cambrianmgmt.com

Date: 08/06/2018 Phone: 432-620-9181

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 8/7/2018 Expiration Date:

Conditions of Approval: Attached ☐

1) Please inspect liner in question. Provide NMOCD with a concise report of the inspection with affirmation the liner has and will continue to contain liquids.
2) At least one photo must demonstrate the entire facility is lined.

* Attach Additional Sheets If Necessary

nOY1821950108 pOY1821950272 1RP-5149

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

X Initial Report ☐ Final Report

Name of Company Cambrian Management, Ltd	Contact Mr. Mike Anthony
Address PO Box 272, Midland, TX 79702	Telephone No. 432-631-4398
Facility Name Kaiser State SWD	Facility Type SWD

Surface Owner State	Mineral Owner State	API No. 30-025-02538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	21S	34E	1980	North	1980	West	Lea

Latitude 32.480938 N_ Longitude -103.425227___ NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 500 Bbls	Volume Recovered 500 Bbls
Source of Release Unload Tanks	Date and Hour of Occurrence 08/17/2018 10:00AM	Date and Hour of Discovery 08/17/2018 11:00 AM
Was Immediate Notice Given? X Yes ☐ No ☐ Not Required	If YES, To Whom? Olivia Yu and other OCD member on location	
By Whom? Mike Anthony	Date and Hour 12:00 PM 08/17/2018	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 10:04 am, Aug 21, 2018

Describe Cause of Problem and Remedial Action Taken.*
A valve did not close completely and the tanks ran oved into a completely lined pit @ the unload tank area. The valve is being repaired or replaced as needed.

Describe Area Affected and Cleanup Action Taken.*

The release was completely contained within a lined pit. All water was recovered. The pit liner and tanks will be washed after all water has been picked up.

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Signature: Denise Jones

Printed Name: Denise Jones

Title: Regulatory Analyst

E-mail Address: djones@cambrianmgmt.com

Date: 08/17/2018 Phone:432-620-9181

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: gj

Approval Date: 8/21/2018 Expiration Date:

Conditions of Approval: Attached ☐

1) Inspect liner in question. Provide NMOCD with a concise report of the inspection with affirmation the liner has and will continue to contain liquids.
2) Dated photo documentation of liner.

* Attach Additional Sheets If Necessary

nOY1823336566 pOY1823336912 1RP-5163

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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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	NCH1834760902
District RP	1RP-5273
Facility ID	
Application ID	pCH1834761047

Release Notification

Responsible Party

Responsible Party **Permian Water Solutions, LLC**	OGRID **373626**
Contact Name **Dale Glosson**	Contact Telephone **432-894-3636**
Contact email **dale@permianws.com**	Incident # NCH1834760902 KAISER STATE SWD @ 30-025-02538
Contact mailing address **PO Box 2106, Midland, TX 79702**	

Location of Release Source

Latitude **32.480938** Longitude **-103.425227**
(NAD 83 in decimal degrees to 5 decimal places)

Site Name **Kaiser State SWD**	Site Type **Salt Water Disposal**
Date Release Discovered **11/2/18**	API# *(if applicable)* **30-025-02538**

Unit Letter	Section	Township	Range	County
F	**13**	**21S**	**34E**	**Lea**

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) **20**	Volume Recovered (bbls) **16**
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release **Oil skim tank overflow; all fluids contained within containment berm**

State of New Mexico
Oil Conservation Division

Incident ID	NCH1834760902
District RP	1RP-5273
Facility ID	
Application ID	pCH1834761047

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? **Yes, Dale Glosson called District I office @ 11:25 am on 11/2/18, was transferred to Christina Hernandez, Left voicemail and call back number. C. Hernandez called back later in the afternoon and the report was made.**

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why: **The hydrocarbon impacted soil is in process of being removed and stored on plastic liner, as well as covered with plastic liner to prevent rainwater from dispersing hydrocarbon contamination, pending soil sampling and site assessment.**

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: Dale Glosson Title: Operations Manager
Signature: [signature] Date: 12/15/18
email: dale@permianws.com Telephone: 432.894.3636

OCD Only

Received by: **RECEIVED** By CHernandez at 4:56 pm, Dec 13, 2018

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature:_____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date**:** _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: _____ 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 - Kaiser SWD

20 South 34 East

6	5	4 125	3	2	1
7	8	9	10	11	12
18	17 128 140	16	15	14 150	13
19	20	21	22	23	24 270
30	29	28	27	26	25
31	32	33	34 82	35	36

20 South 35 East

6 56 64	5 64	4	3	2	1
7	8	9	10	11	12 49
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31 65	32	33 89	34	35	36

20 South 36 East

6 32	5 28	4	3	2 92	1 40
7	8 33	9 38	10	11 32	12 29
18 34	17	16	15	14 45	13
19	20	21	22	23	24
30	29	28	27	26 106 170	25
31	32 170	33	34	35 122	36

21 South 33 East

6	5	4	3	2 79 107	1
7	8	9	10	11 150	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28 179	27	26	25
31	32	33 180	34	35	36

21 South 34 East

6	5	4 95	3	2	1
7	8 120	9	10	11	12
18	17	16 105	15	14	13 100
19	20	21 128	22	23	24
30	29	28 135	27	26	25
31	32	33	34	35	36

21 South 35 East

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

22 South 33 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13 391
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

22 South 34 East

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

22 South 35 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00089	O	CP	LE		2	1	13	21S	34E	647840	3594615	235		
CP 00092 POD1		CP	LE	1	3	1	25	21S	34E	647479	3591694*	196		
CP 00489		CP	LE				04	21S	34E	643274	3597749*	125	95	30
CP 00498		CP	LE		2	4	08	21S	34E	642287	3595932*	145	120	25
CP 00571 POD1		CP	LE	3	1	4	28	21S	34E	643499	3591063	170	135	35
CP 00583		CP	LE			3	21	21S	34E	642944	3592518*	171	128	43
CP 00588 POD1		CP	LE		3	2	33	21S	34E	643583	3589918*	89		
CP 00589 POD1		CP	LE		3	2	33	21S	34E	643583	3589918*	84		
CP 00590 POD1		CP	LE				01	21S	34E	648099	3597829*	79		
CP 00611		CP	LE		2	1	06	21S	34E	639838	3598306*	118	112	6
CP 00791		CP	LE	4	2	4	06	21S	34E	640754	3597413*	85	55	30
CP 01066 POD1		CP	LE	4	3	2	28	21S	34E	643735	3591345	210	140	70
CP 01067 POD1		CP	LE	1	3	4	28	21S	34E	643447	3591434	210	140	70
CP 01068 POD1		CP	LE	4	1	4	28	21S	34E	643609	3591005	180	140	40
CP 01069 POD1		CP	LE	2	1	4	28	21S	34E	643737	3591191	210	140	70
CP 01091 POD1		CP	LE	3	3	2	28	21S	34E	643446	3591434	200	140	60
CP 01364 POD1		CP	LE	4	2	3	16	21S	34E	643147	3594331	165	105	60
CP 01366 POD1		CP	LE	4	4	1	16	21S	34E	643196	3594698	180	110	70
CP 01671 POD1		CP	LE	2	4	1	16	21S	34E	643108	3594887	157		

Average Depth to Water: **120 feet**

Minimum Depth: **55 feet**

Maximum Depth: **140 feet**

Record Count: 19

PLSS Search:

Township: 21S **Range:** 34E

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

National Water Information System: Web Interface

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

site_no list =

- 322824103253301

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

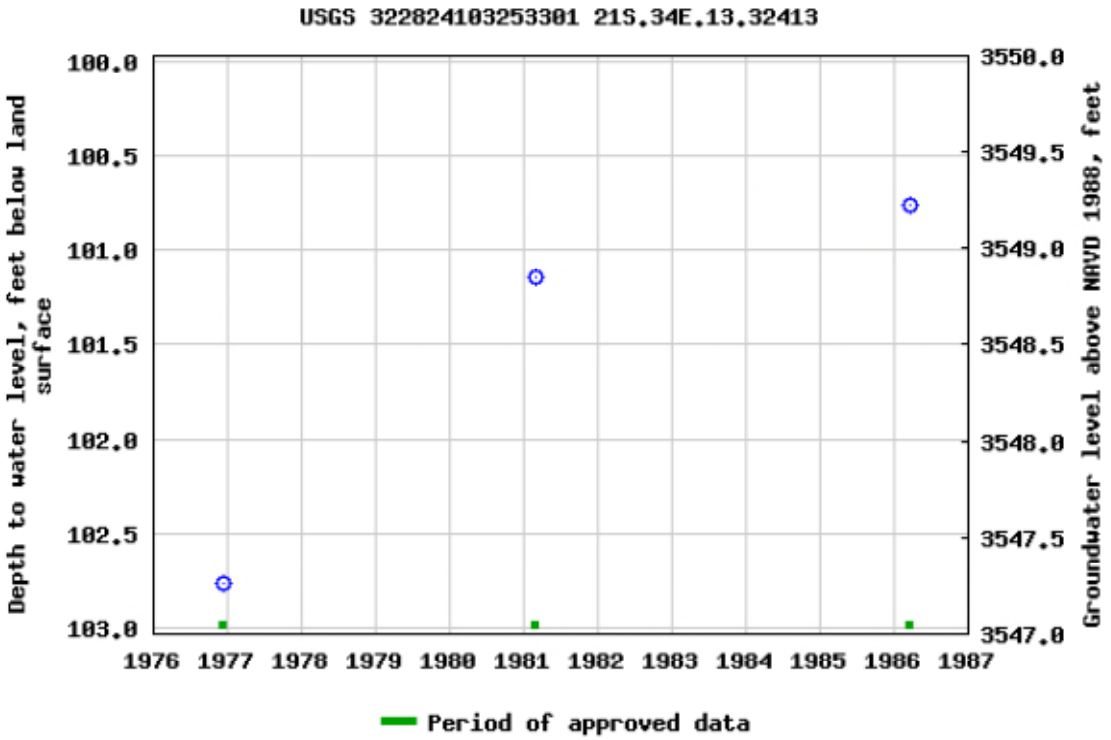
USGS 322824103253301 21S.34E.13.32413

Available data for this site Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°28'24", Longitude 103°25'33" NAD27
Land-surface elevation 3,650 feet above NAVD88
The depth of the well is 335 feet below land surface.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

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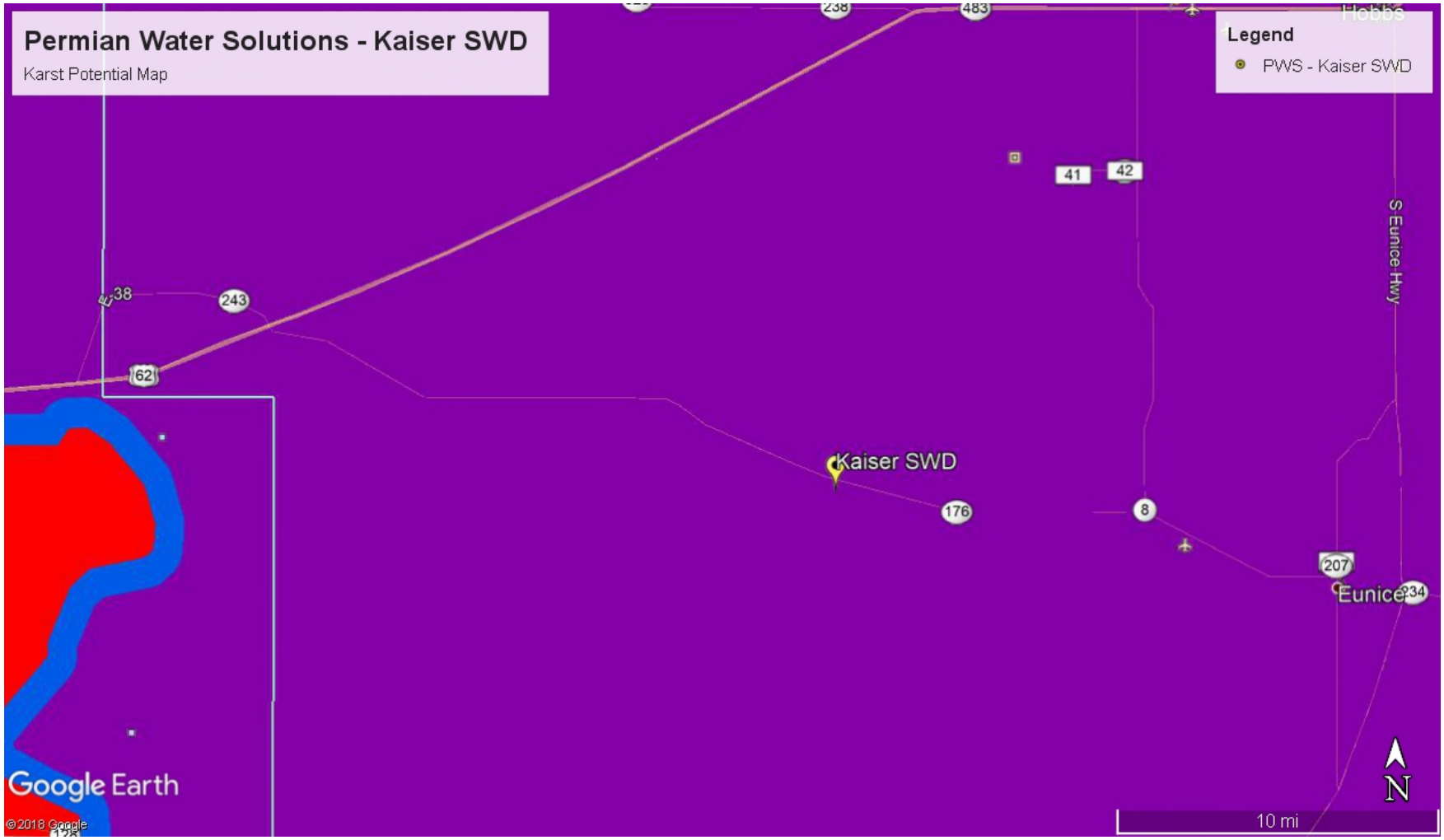
Permian Water Solutions - Kaiser SWD
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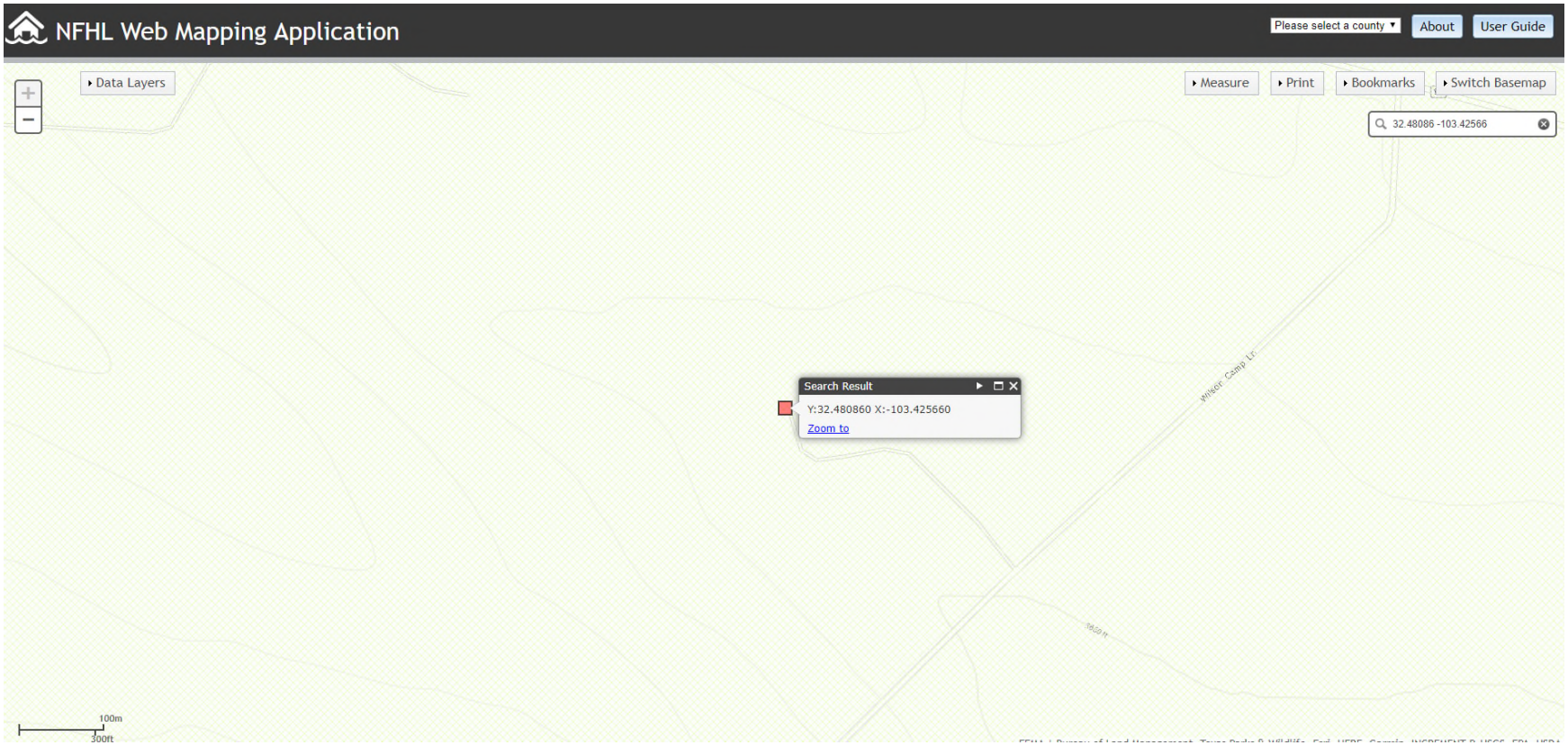
NFHL Web Mapping Application
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Switch Basemap
32.48086 -103.42566
Search Result
Y:32.480860 X:-103.425660
Zoom to
Wilson Camp Ln
100m
300ft

Appendix C

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-1**
GPS	**32.480778° -103.425919°**
Project #:	**212C-MD-01742**
Total Depth	**35'**
Date Installed:	**5/7/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Caliche and sand*	*No odor or Odor*	*3140*	-
2-3	*Caliche and sand*	*No Stain or odor*	*1,700*	-
4-5	*Caliche and sand*	*No Stain or odor*	*1,090*	-
6-7	*Caliche and sand*	*No Stain or odor*	*879*	-
9-10	*Caliche and sand*	*No Stain or odor*	*780*	-
14-15	*Caliche and sand*	*No Stain or odor*	*685*	-
19-20	*Caliche and sand*	*No Stain or odor*	*765*	-
24-25	*Caliche and sand*	*No Stain or odor*	*476*	*240*
29-30	*Caliche and sand*	*No Stain or odor*	*274*	*200*
34-35	*Caliche and sand*	*No Stain or odor*	*265*	-

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-2**
GPS	**32.480951° -103.425927°**
Project #:	**212C-MD-01742**
Total Depth	**35'**
Date Installed:	**5/7/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Sand, concrete cuttings*	*Moderate odor*	*4980*	-
2-3	*Sand, concrete cuttings*	*Moderate odor*	*4,000*	-
4-5	*Silty sand*	*Moderate odor*	*1,990*	-
6-7	*Silty sand*	*Heavy odor*	*1,800*	-
9-10	*Silty sand*	*Faint odor*	*2,500*	-
14-15	*Limestone and chert*	*Very faint odor*	*2,950*	-
19-20	*Limestone and chert*	*No Stain or odor*	*924*	-
24-25	*Limestone and chert*	*No Stain or odor*	*787*	-
29-30	*Limestone and chert*	*No Stain or odor*	*510*	*280*
34-35	*Limestone and chert*	*No Stain or odor*	*461*	*320*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-3**
GPS	**32.481342° -103.425949°**
Project #:	**212C-MD-01742**
Total Depth	**5.5'**
Date Installed:	**5/13/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Caliche***	***Faint odor***	***2,420***	**-**
1-1.5	***Brown sand and caliche***	***No odor***	***415***	**-**
2-2.5	***Light brown sand and caliche***	***No odor***	***400***	**-**
3-3.5	***Light brown sand and caliche***	***No odor***	***297***	**-**
4-4.5	***Light brown sand and caliche***	***No odor***	***312***	**-**
5-5.5	***Light brown sand and caliche***	***No odor***	***365***	**-**

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-4**
GPS	**32.481349° -103.425743°**
Project #:	**212C-MD-01742**
Total Depth	**15'**
Date Installed:	**5/7/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Sand and caliche***	***No stain or odor***	***1620***	**-**
2-3	***Sand and caliche***	***No stain or odor***	***1,690***	**-**
4-5	***Sand and caliche***	***No stain or odor***	***1,140***	**-**
6-7	***Sand and caliche***	***No stain or odor***	***714***	**-**
9-10	***Sand and caliche***	***No stain or odor***	***656***	**480**
14-15	***Sand and caliche***	***No stain or odor***	***655***	**480**

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-5**
GPS	**32.480979° -103.425687°**
Project #:	**212C-MD-01742**
Total Depth	**35'**
Date Installed:	**5/7/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand*	*No Stain or odor*	*3180*	-
2-3	*Dark brown sand*	*No Stain or odor*	*1,020*	-
4-5	*Dark brown sand*	*No Stain or odor*	*754*	*400*
6-7	*Dark brown sand*	*Heavy odor*	*510*	-
9-10	*Dark brown sand*	*Heavy odor*	*610*	-
14-15	*Dark brown sand*	*Heavy odor*	*673*	-
19-20	*Dark brown sand*	*Heavy odor*	*689*	-
24-25	*Dark brown sand*	*Moderate odor*	*575*	-
29-30	*Light tan sand*	*No Stain or odor*	*679*	*240*
34-35	*Light tan sand*	*No Stain or odor*	*596*	*200*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-6**
GPS	**32.480748° -103.425638°**
Project #:	**212C-MD-01742**
Total Depth	**20'**
Date Installed:	**5/7/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Dark brown sand***	***No Stain or odor***	***3950***	**-**
2-3	***Dark brown sand***	***No Stain or odor***	***2,020***	**-**
4-5	***Dark brown sand***	***No Stain or odor***	***1,030***	**-**
6-7	***Light tan sand and caliche***	***No Stain or odor***	***905***	**-**
9-10	***Light tan sand and caliche***	***No Stain or odor***	***825***	***640***
14-15	***Light tan sand and caliche***	***No Stain or odor***	***642***	***480***
19-20	***Light tan sand and caliche***	***No Stain or odor***	***531***	***450***

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-7**
GPS	**32.480544° -103.425502°**
Project #:	**212C-MD-01742**
Total Depth	**25'**
Date Installed:	**5/7/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand*	*Very faint odor*	*2360*	-
2-3	*Dark brown sand*	*Very faint odor*	*1,120*	-
4-5	*Light tan and red sand*	*No Stain or odor*	*783*	-
6-7	*Light tan and red sand*	*No Stain or odor*	*615*	*600*
9-10	*Light tan and red sand*	*No Stain or odor*	*632*	*720*
14-15	*Light tan and red sand*	*No Stain or odor*	*752*	*720*
19-20	*Light tan and red sand*	*No Stain or odor*	*655*	*440*
24-25	*Light tan and red sand*	*No Stain or odor*	*300*	*280*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-8**
GPS	**32.480767° -103.425401°**
Project #:	**212C-MD-01742**
Total Depth	**30'**
Date Installed:	**5/7/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand*	*Faint odor*	*9,080*	*-*
2-3	*Dark brown sand*	*Faint odor*	*5,650*	*-*
4-5	*Dark brown sand*	*Faint odor*	*4,490*	*-*
6-7	*Light tan and red sand*	*No Stain or odor*	*4,370*	*-*
9-10	*Light tan and red sand*	*No Stain or odor*	*3,970*	*-*
14-15	*Light tan and red sand*	*No Stain or odor*	*3,100*	*-*
19-20	*Sand with caliche and cert*	*No Stain or odor*	*1,700*	*-*
24-25	*Red sand*	*No Stain or odor*	*452*	*400*
29-30	*Red sand*	*No Stain or odor*	*147*	*180*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-9**
GPS	**32.481030° -103.425445°**
Project #:	**212C-MD-01742**
Total Depth	**35'**
Date Installed:	**5/7/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Dark brown sand***	***Faint odor***	***5,280***	***-***
2-3	***Dark brown sand***	***Faint odor***	***2,250***	***-***
4-5	***Light tan sand and caliche***	***No Stain or odor***	***1,820***	***-***
6-7	***Light tan sand and caliche***	***No Stain or odor***	***2,610***	***-***
9-10	***Light tan sand and caliche***	***No Stain or odor***	***2,280***	***-***
14-15	***Red sand***	***No Stain or odor***	***2,270***	***-***
19-20	***Red sand***	***No Stain or odor***	***2,680***	***-***
24-25	***Red sand***	***No Stain or odor***	***1,530***	***-***
29-30	***Red sand***	***No Stain or odor***	***405***	***440***
34-35	***Red sand***	***No Stain or odor***	***421***	***320***

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-10**
GPS	**32.481350° -103.425486°**
Project #:	**212C-MD-01742**
Total Depth	**5'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand*	*No Stain or odor*	*1,200*	*-*
2-3	*Dark brown sand*	*No Stain or odor*	*680*	*560*
4-5	*Light tan sand and caliche*	*No Stain or odor*	*507*	*360*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-11**
GPS	**32.481352° -103.425213°**
Project #:	**212C-MD-01742**
Total Depth	**10'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Dark brown sand***	***No Stain or odor***	***940***	***-***
2-3	***Light tan sand and caliche***	***No Stain or odor***	***1,010***	***-***
4-5	***Light tan sand and caliche***	***No Stain or odor***	***915***	***640***
6-7	***Light tan sand and caliche***	***No Stain or odor***	***475***	***400***
9-10	***Light tan sand and caliche***	***No Stain or odor***	***276***	***240***

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-12**
GPS	**32.480449° -103.425113°**
Project #:	**212C-MD-01742**
Total Depth	**15'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Dark brown sand***	***No Stain or odor***	***1,140***	***-***
2-3	***Dark brown sand***	***No Stain or odor***	***1,330***	***-***
4-5	***Light tan sand and caliche***	***No Stain or odor***	***895***	***600***
6-7	***Light tan sand and caliche***	***No Stain or odor***	***397***	***400***
9-10	***Light tan sand and caliche***	***No Stain or odor***	***325***	***320***
14-15	***Light tan sand and caliche***	***No Stain or odor***	***355***	***200***

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-13**
GPS	**32.480942° -103.424907°**
Project #:	**212C-MD-01742**
Total Depth	**1'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand*	*No Stain or odor*	*308*	-

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-14**
GPS	**32.481152° -103.424928°**
Project #:	**212C-MD-01742**
Total Depth	**35'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand*	*No Stain or odor*	*895*	-
2-3	*Dark brown sand*	*No Stain or odor*	*667*	-
4-5	*Red sand*	*No Stain or odor*	*1,060*	-
6-7	*Red sand*	*No Stain or odor*	*898*	*440*
9-10	*Red sand*	*No Stain or odor*	*516*	*480*
14-15	*Red sand*	*No Stain or odor*	*1,120*	*560*
19-20	*Light tan sand with limestone and chert*	*No Stain or odor*	*1,510*	*1,400*
24-25	*Light tan sand with limestone and chert*	*No Stain or odor*	*1,020*	-
29-30	*Red sand*	*No Stain or odor*	*424*	*400*
34-35	*Red sand*	*No Stain or odor*	*315*	*120*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-15**
GPS	**32.480365° -103.425729°**
Project #:	**212C-MD-01742**
Total Depth	**7'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Dark brown sand***	***No Stain or odor***	***1,050***	***-***
2-3	***Dark brown sand***	***No Stain or odor***	***945***	***680***
4-5	***Dark brown sand***	***No Stain or odor***	***970***	***400***
6-7	***Light tan sand and caliche***	***No Stain or odor***	***1,030***	***440***

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-16**
GPS	**32.480448° -103.425897°**
Project #:	**212C-MD-01742**
Total Depth	**20'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand with gravel*	*No Stain or odor*	*553*	-
2-3	*Dark brown sand with gravel*	*No Stain or odor*	*1,350*	-
4-5	*Dark brown sand with gravel*	*No Stain or odor*	*1,390*	-
6-7	*Dark brown sand with gravel*	*No Stain or odor*	*1,430*	-
9-10	*Dark brown sand with gravel*	*No Stain or odor*	*1,250*	-
14-15	*Light tan sand and caliche*	*No Stain or odor*	*975*	*440*
19-20	*Light tan sand and caliche*	*No Stain or odor*	*725*	*360*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-17**
GPS	**32.481215° -103.425292°**
Project #:	**212C-MD-01742**
Total Depth	**5.5'**
Date Installed:	**5/13/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Caliche*	*Heavy odor*	-	-
2-3	*Caliche*	*Heavy odor*	-	-
3-4	*Caliche*	*Heavy odor*	-	-
4-4.5	*Dark brown sand with clay & caliche*	*Moderate odor*	*OL*	-
5-5.5	*Dark brown sand with clay & caliche*	*Faint odor*	*OL*	-

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-18**
GPS	**32.480967° -103.425281°**
Project #:	**212C-MD-01742**
Total Depth	**3'**
Date Installed:	**5/7/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Dark sand and caliche***	***Heavy odor***	***4490***	**-**
2-3	***Dark sand and caliche***	***Heavy odor***	***3,340***	**-**

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-19**
GPS	**32.480697° -103.425278°**
Project #:	**212C-MD-01742**
Total Depth	**4.5'**
Date Installed:	**5/13/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark sand and caliche*	*Heavy odor*	*4040*	-
2-3	*Dark sand and caliche*	*Heavy odor*	*6,270*	-
4-4.5	*Dark sand and caliche*	*Heavy odor*	*3,130*	OL

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-20**
GPS	**32.480723° -103.425099°**
Project #:	**212C-MD-01742**
Total Depth	**5.5'**
Date Installed:	**5/13/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Dark sand and caliche***	***Heavy odor***	***1660***	**-**
2-3	***Dark sand and caliche***	***Heavy odor***	***1,270***	**-**
4-4.5	***Dark sand and caliche***	***Moderate odor***	***1,300***	**1200**
5-5.5	***Light sand and caliche***	***Moderate odor***	***1,400***	***1280***

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-21**
GPS	**32.480913° -103.425125°**
Project #:	**212C-MD-01742**
Total Depth	**5.5'**
Date Installed:	**5/13/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark sand and caliche*	*Heavy odor*	*1640*	-
2-3	*Dark sand and caliche*	*Heavy odor*	*1,230*	-
4-4.5	*Dark sand and caliche*	*Moderate odor*	*2,340*	1760
5-5.5	*Dark sand and caliche*	*Moderate odor*	*2,100*	*1520*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-22**
GPS	**32.481100° -103.425121°**
Project #:	**212C-MD-01742**
Total Depth	**4.5'**
Date Installed:	**5/13/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark sand and caliche*	*Faint odor*	*809*	*-*
2-3	*Dark sand and caliche*	*Faint odor*	*843*	*-*
3-3.5	*Light brown sand and caliche*	*Faint odor*	*1,110*	*640*
4-4.5	*Light brown sand and caliche*	*No stain or odor*	*840*	*880*

Client:	Permian Water Solutions
Site Name	Kaiser SWD
Sample ID:	SP-23
GPS	32.480575° -103.425705°
Project #:	212C-MD-01742
Total Depth	4.5'
Date Installed:	5/14/2019

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Sand with gravel and caliche*	*Heavy stain and odor*	*-*	*-*
1-1.5	*Caliche*	*Heavy odor*	*374*	*-*
2-2.5	*Red clay*	*Heavy odor*	*1,400*	*-*
3-3.5	*Caliche*	*Heavy stain and odor*	*1,590*	*-*
4-4.5	*Caliche*	*Heavy stain and odor*	*2,020*	*-*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-24**
GPS	**32.480632° -103.425799°**
Project #:	**212C-MD-01742**
Total Depth	**1'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Sand with gravel and caliche*	*Heavy stain and odor*	-	-
	Deeper samples could not be obtained			
	due to rain water puddling in the area			
	upon return.			

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-25**
GPS	**32.480534° -103.425837°**
Project #:	**212C-MD-01742**
Total Depth	**5.5'**
Date Installed:	**5/14/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Sand with gravel and caliche***	***Heavy stain and odor***	***-***	***-***
1-1.5	***Caliche***	***Heavy stain and odor***	***2,640***	***-***
2-2.5	***Red clay***	***Heavy stain and odor***	***1,380***	***-***
3-3.5	***Caliche***	***Heavy stain and odor***	***3,090***	***-***
4-4.5	***Caliche***	***Heavy stain and odor***	***2,410***	***-***
5-5.5	***Caliche***	***Heavy stain and odor***	***2,320***	***-***

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-26**
GPS	**32.480451° -103.425751°**
Project #:	**212C-MD-01742**
Total Depth	**1'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Sand with gravel and caliche*	*Heavy stain and odor*	-	-
	Deeper samples could not be obtained			
	due to rain water puddling in the area			
	upon return.			

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-27**
GPS	**32.481092° -103.425951°**
Project #:	**212C-MD-01742**
Total Depth	**40'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand and gravel*	*No Stain or odor*	*3420*	-
2-3	*Dark brown sand and gravel*	*No Stain or odor*	*4,800*	-
4-5	*Sand*	*Heavy odor*	*2,830*	-
6-7	*Sand and gravel*	*Moderate odor*	*8,000*	-
9-10	*Sand and gravel*	*Moderate odor*	*7,400*	-
14-15	*Sand and gravel*	*Moderate odor*	*7,300*	-
19-20	*Sand and gravel*	*Moderate odor*	*4,650*	-
24-25	*Sand and gravel*	*Moderate odor*	*287*	-
29-30	*Silty sand*	*No Stain or odor*	*415*	*400*
34-35	*Silty sand*	*No Stain or odor*	*385*	*200*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-29**
GPS	**32.481134° -103.425716°**
Project #:	**212C-MD-01742**
Total Depth	**7'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Dark brown sand and gravel***	***No Stain or odor***	***2,280***	***-***
2-3	***Dark brown sand and gravel***	***No Stain or odor***	***957***	***720***
4-5	***Sand and caliche***	***No Stain or odor***	***200***	***200***
6-7	***Sand and caliche***	***No Stain or odor***	***160***	***160***

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-30**
GPS	**32.481158° -103.425458°**
Project #:	**212C-MD-01742**
Total Depth	**15'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand and gravel*	*No Stain or odor*	*5010*	*-*
2-3	*Dark brown sand and gravel*	*No Stain or odor*	*2,410*	*-*
4-5	*Sand and caliche*	*No Stain or odor*	*1,010*	*-*
6-7	*Sand and caliche*	*No Stain or odor*	*946*	*-*
9-10	*Sand and caliche*	*No Stain or odor*	*858*	*480*
14-15	*Sand and caliche*	*No Stain or odor*	*262*	*200*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-31**
GPS	**32.480607° -103.425155°**
Project #:	**212C-MD-01742**
Total Depth	**5'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	*Dark brown sand*	*No Stain or odor*	*355*	*-*
2-3	*Dark brown sand*	*No Stain or odor*	*200*	*200*
4-5	*Dark brown sand*	*No Stain or odor*	*212*	*160*

Client:	**Permian Water Solutions**
Site Name	**Kaiser SWD**
Sample ID:	**SP-32**
GPS	**32.480746° -103.424896°**
Project #:	**212C-MD-01742**
Total Depth	**5'**
Date Installed:	**5/8/2019**

DEPTH (Ft)	Lithology/Sample Description	NOTES	Salinity (ppm)	Chloride (ppm)
0-1	***Dark brown sand***	***No Stain or odor***	***243***	***-***
2-3	***Dark brown sand***	***No Stain or odor***	***762***	***400***
4-5	***Dark brown sand***	***No Stain or odor***	***755***	***560***

TETRA TECH

Borehole ID:
BH-17

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.481227 -103.425306
Elevation :

Date : Monday, October 21, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black/brown sand		
		Black/brown sand		
		Red sand and silt		
5		Red sand and silt		
10		Fine dry brown sand		
		Dense layer of caliche		
15		Caliche with pebbels		
20		Tan Sand with caliche	840	
		Dense layer of caliche		
25		White fine caliche	700	
		Brown sand		
30		Fine red sand	500	
35		Red Sand	480	
40				
45				
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75				
		Comments: T.D 30'		

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

TETRA TECH

Borehole ID:
BH-18

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.480967 -103.425290
Elevation :

Date : Monday, October 21, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black and brown sand / gravel		
		Black gravel		
5		tan and black gravel and sand		
		Dense layer of caliche		
10		tan caliche		
15		Caliche layer	1,200	
20		Red brown sand		
		Dense layer of calchie		
25		Red brown sand	1,800	
30		Red brown sand	1,800	
35		Red brown sand	1,000	
40		Red brown sand	800	
45		Red brown sand	480	
50		Red brown sand	400	

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75				
		Comments: T.D 50'		

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

TETRA TECH

Borehole ID:
BH-19

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.480704 -103.425281
Elevation :

Date : Tuesday, October 22, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black brown sand with gravel		
5		Black brown sand with gravel		
10		tan sand with calcihe		
		Dense layer of caliche		
15		Caliche with tan sand		
20		Tan caliche with sand	>2000	
25		Red dry sand		
30		Red dry sand Dense layer of caliche	242	
35		Red fine sand	142	
40		Red fine sand	313	
45				
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75				
		Comments: T.D 40'		

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

TETRA TECH

Borehole ID:
BH-20

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.480704 -103.425094
Elevation :

Date : Tuesday, October 22, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black gravel and sand		
		Black gravel with sand		
5		grey gravel and tan sand		
		Tan sand and gravel		
10		Fine dry tan sand		
		Dense layer of clay		
15		Tan sand and gravel		
20		Tan sand and gravel	940	
25		Red fine sand Dense layer of caliche	240	
30		Red sand fine	200	
35				
40				
45				
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75		Comments: T.D 30'		

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

TETRA TECH

Borehole ID:
BH-23

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.4800551 -103.425712
Elevation :

Date : Tuesday, October 22, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black gravel damp		
		black gravel damp		
5		tan sand / gravel		
10		Tan sand and gravel		
15		Caliche with tan sand		
		Dense layer of caliche		
20		Caliche sand tan	>2000	
25		Red sand dry		
30		Dry red sand		
35		Dry red sand		
40		Dry red sand	1,200	
45		Damp red sand	1,100	
50		Damp red sand	440	

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55		Damp red sand	400	
60				
65				
70				
75				
		Comments: T.D 55'		

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

TETRA TECH

Borehole ID:
BH-24

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.480613 -103.425790
Elevation :

Date : Tuesday, October 22, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black brown gravel		
		Tan black gravel and sand		
5		Tan sand dry		
		brown tan sand		
10		Brown tan sand		
15		Tan caliche with gravel		
20		Tan caliche with gravel	242	
25		Red sand with gravel	480	
30		Red sand	376	
35				
40				
45				
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75		Comments: T.D 30'		

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

TETRA TECH

Borehole ID:
BH-25

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.480517 -103.425836
Elevation :

Date : Tuesday, October 22, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black gravel with sand		
		Black gravel		
5		Brown sand with black gravel		
		Brown sand		
10		Tan sand w/ caliche		
15		Caliche with tan sand Dense layer of caliche		
20		Dry red sand	520	
		Dense layer of caliche		
25		Red dry sand	480	
30				
35				
40				
45				
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75		Comments: T.D 25'		

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

TETRA TECH

Borehole ID:
BH-26

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.480445 -103.425753
Elevation :

Date : Tuesday, October 22, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black and brown sand		
		Black and brown sand		
5		Black sand and gravel		
		Tan sand		
10		Tan sand		
15		Tan sand with calcihe		
20		Tan sand with caliche	800	
		Soft caliche		
25		Red sand	699	
30		Red sand	500	
35		Red sand	480	
40				
45				
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75				
		Comments: T.D 35'		

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

TETRA TECH

Borehole ID:
BH-33

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.480752 -103.425214
Elevation :

Date : Tuesday, October 22, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black gravel with sand		
		Black gravel and sand		
5		Brown sand with clay		
10		Dry brown sand		
15		Dry red sand	400	
20		Red sand with gravel	280	
25				
30				
35				
40				
45				
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75		Comments: T.D 20'		

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

TETRA TECH

Borehole ID:
BH-34

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.480939 -103.425204
Elevation :

Date : Tuesday, October 22, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black and brown sand		
		Black and brown gravel and sand		
5		Dry brown sand and clay		
		Dry brown sand		
10		Dry red sand		
15		Dry red sand		
20		Dense layer of caliche	1,600	
25		Caliche cobbles		
30		Dry red sand		
35		Dry red sand	540	
40		Dry red sand	400	
45				
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75		Comments: T.D 40'		

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

TETRA TECH

Borehole ID:
BH-35

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.481099 -103.425226
Elevation :

Date : Monday, October 21, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black and brown gravel and sand		
		Black and brown gravel and sand		
5		Brown and tand sand		
10		brown sand and caliche		
15		Brown sand		
20		Dense layer of calciche		
25		Red sand		
30		Red sand		
35		Red sand with caliche pebbles		
40		Very dense kayer of calcihe		
45		Very dense kayer of calciche		
50		Red Sand		

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75		Comments: T.D 50'		

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

TETRA TECH

Borehole ID:
BH-36

Soil Drilling Log with Field Testing Results

Project Name : Kaiser St SWD
Project No. : 212C-MD-01742
Location : Lea Co, NM
Coordinates : 32.481235 -103.425211
Elevation :

Date : Monday, October 21, 2019
Sampler : Conner Moehring
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	PID
0		Black and brown gravel and sand		
		Brown tan gravel		
5		Tan caliche	7,260	
		Dense layer of caliche		
10		Brown tan sand	1,620	
15		Brown/tan sand	460	
20		Fine tan sand	600	
25				
30				
35				
40				
45				
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50				
55				
60				
65				
70				
75		Comments: T.D 20'		

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