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	nOY1727952679
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC	OGRID: 246289
Contact Name: Jim Raley	Contact Telephone: 575-689-7597
Contact email: Jim.Raley@dvn.com	Incident # *(assigned by OCD)*: nOY1727952679
Contact mailing address: 5315 Buena Vista Drive, Carlsbad NM	

Location of Release Source

Latitude 32.64457 Longitude -103.44839
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Toro 22-3	Site Type: Well Pad
Date Release Discovered: 9/21/2017	API# *(if applicable)*: 30-025-35253

Unit Letter	Section	Township	Range	County
K	22	19S	35E	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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls): 120	Volume Recovered (bbls): 110
	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:
The cause of this spill is equipment failure; corroded tank. Approximately 120 bbls of produced water were spilled inside the dirt SPCC containment. 110 bbls were recovered with a vac truck.

$$bbl\ estimate = \frac{saturated\ soil\ volume\ (ft^3)}{4.21\ (\frac{ft^3}{bbl\ equivalent})} * estimated\ porosity\ (\%) + recovered\ fluids\ (bbl)$$

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nOY1727952679
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Facility ID	
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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? Unauthorized release of a volume, excluding gases, of 25 barrels or more.

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

Immediate notice was given by Karolina Blaney, to EMNRD Olivia Yu, on September 21, 2017 via email.

Initial Response

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

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

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

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

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

Printed Name: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 7/26/2023

email: Jim.Raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: _____ Date: _____

Incident ID	nOY1727952679
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nOY1727952679
District RP	
Facility 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: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 7/26/2023

email: Jim.Raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: Shelly Wells Date: 7/27/2023

Incident ID	nOY1727952679
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: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 7/26/2023

email: Jim.Raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: Shelly Wells Date: 7/27/2023

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

Signature: Nelson Velez Date: 07/31/2023

ETECH Environmental & Safety Solutions, Inc.

REMEDIATION WORK PLAN

Toro 22-3

Lea County, New Mexico

Incident Number nOY1727952679

Prepared for:

WPX Energy Permian, LLC

Carlsbad ● Midland ● San Antonio ● Lubbock ● Hobbs ● Lafayette

SYNOPSIS

In response to a meeting with New Mexico Oil and Conservation Division (NMOCD) for the denial of a Remediation Work Plan (RWP), Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of WPX Energy Permian, LLC (WPX), presents the following updated RWP detailing additional delineation soil sampling activities at the Toro 22-3 (Site) associated with an inadvertent release of produced water. The previous RWP was denied on June 20, 2023, due to the following reasons:

"1. Site assessment has not been fully delineated horizontally or vertically. 2. Site characterization data incomplete. Please provide supporting documentation for those items missing from the list on page 3 of Form C-141 in next submittal or final closure report. 3. Once bullet #1 has been achieved, operator is required to re-submit its revised remediation plan or final closure report. 4. Operator has 90 days (September 18, 2023) to fully delineate, re-submit its remediation plan, or submit final closure report.

• Horizontal delineation submitted was incomplete and did not meet the requirements of 19.15.29.11 NMAC. The values for determination of horizontal impact are derived by either approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less. This is especially important for "on-pad" releases to ensure the release did not extend to the "off-pad"/pasture area. A visual footprint on the surface is not sufficient to assess the horizontal extent of the release. Laboratory data must be provided as evidence of delineation efforts. Any sample exceeding approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less requires additional samples for horizontal delineation."

Etech met with Mr. Nelson Velez from NMOCD on June 22, 2023, following the denial to discuss the Site and recommended action items in an updated report. This updated RWP details the summary of remedial actions that will be completed in accordance with communication and requests from Mr. Nelson Velez:

- Mr. Velez requested the advancement of two additional delineation points within the Area of Concern (AOC) to confirm if the variance requested chloride concentration of 654 milligram per kilogram (mg/kg) for PH01 was representative of that depth. Mr. Velez instructed to advance to the same total depth of 21 feet below ground surface (bgs);
- Mr. Velez agreed that horizontal delineation of the subject release can be defined via sidewall confirmation sidewall sampling; and
- Mr. Velez confirmed that if concentrations were below 600 mg/kg at 21 feet bgs for additional both samples collected, Etech could resubmit an updated RWP with the original proposed work plan which detailed: the removal of the top four feet of impacted soil within the AOC, achieving lateral delineation via sidewall confirmation sampling, installing a 20-mil liner at the base of the 4 foot excavation, and backfilling with clean topsoil.

SITE LOCATION AND RELEASE BACKGROUND

The Site is located in Unit K, Section 22, Township 19 South, Range 35 East, in Lea County, New Mexico (32.64457°, -103.44839°) and is associated with oil and gas exploration and production operations on Private Land (**Figure 1** in **Appendix A)**.

On September 21, 2017, corrosion of a storage tank resulted in approximately 120 barrels (bbls) of produced water to be released into a tank battery earthen containment. Vacuum trucks were immediately dispatched and recovered approximately 110 bbls of the released fluids. WPX reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141), which was received by the NMOCD on October 6, 2017, and was subsequently assigned Incident Number nOY1727952679. WPX mapped the release extent utilizing a handheld Trimble® Global Positioning System (GPS) unit immediately after discovery and is presented as the AOC on **Figure 2** in **Appendix A**.

Between September 28 and October 2, 2017, WPX removed the production tanks and excavated the top 1-foot of impacted soil from the AOC to mitigate immediate impacts. A Closure Report was then submitted by WPX and denied due to incomplete soil characterization as a result of equipment refusal. The excavation was backfilled and recontoured to pre-existing conditions before returning the production tanks. On June 12, 2018, Souder Miller & Associates (SMA) conducted continued characterization activities to evaluate soil impacts within the AOC. Based on the data summary from those events, additional delineation activities appeared warranted. Previous remediation summaries can be referenced in the original reports submitted to the NMOCD. Since initial response efforts, plugging and abandonment activities at the Site were completed in 2022.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

Etech characterized the Site according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC) considering depth to groundwater and the proximity to:

- Any continuously flowing watercourse or any other significant watercourse;
- Any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark);
- An occupied permanent residence, school, hospital, institution or church;
- A spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes;
- Any freshwater well or spring;
- Incorporated municipal boundaries or a defined municipal fresh water well field covered under a municipal ordinance;
- A wetland;
- A subsurface mine;
- An unstable area (i.e. high karst potential); and
- A 100-year floodplain.

The initial desktop review referencing the *NMOCD Oil and Gas Map* and/or the *USGS National Water Information System: Mapper* indicated the nearest permitted groundwater well with available data was United States Geological Survey (USGS) well 323832103264901. The location of the well was approximately 675 feet south of the Site and is approximately 4 feet lower in elevation. The most recent depth to groundwater measurement from 1991 was documented at 16.82 feet bgs. However, further review of aerial imagery revealed that the well did not appear to be located at the GPS location designated by USGS (32.6423, -103.4474). As a result, Etech conducted a field verification survey for the well that included walking 50-meter transects within a 500-foot radius of the coordinates. No visual evidence of USGS well 323832103264901 was found. The walking path during field verification was mapped via Trimble® and is included in **Figure 2** in **Appendix A.** Photographic documentation during field verification activities is included in **Appendix B**.

Another water well identified during the desktop review was New Mexico Office of the State Engineer (NMOSE) well L-04290, located approximately 917 feet north of the Site. Depth to groundwater was documented at 18 feet bgs in 1959. However, records indicate the well was permitted for “secondary recovery of oil” via “water flooding” and has since been capped and is no longer in use. As such, NMOSE well L-04290 appeared to be restricted to oil and gas operations and never used as a “fresh water” well, therefore, the proximity of the well to the Site alone does not deem the well protectable.

The next closest water well with data is NMOSE well L-15155 POD 1, located approximately 1,445 feet south of the Site and approximately 5 feet lower in elevation. The well has a reported depth to groundwater of 35 feet bgs from 2021. Based on this information and findings from the regional water well review, groundwater depth at the Site is estimated to be less than 50 feet bgs. All well records referenced for depth to groundwater determination are included in **Appendix C**.

All other potential receptors are not within the established buffers in NMAC 19.15.29.12. Receptor details and sources used to determine the site characterization are included in **Figure 1** in **Appendix A**.

Based on the results from the desktop review and estimated regional depth to groundwater at the Site, the following Closure Criteria was applied:

Constituents of Concern (COCs)	Laboratory Analytical Method	Closure Criteria
Chloride	Environmental Protection Agency (EPA) 300.0	600 mg/kg
Total Petroleum Hydrocarbon (TPH)	EPA 8015 M/D	100 mg/kg
Benzene	EPA 8021B	10 mg/kg
Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA 8021B	50 mg/kg

DELINEATION SOIL SAMPLING ACTIVITIES

On January 4, 2023, a third-party environmental contractor was retained to reassess the Site based on information provided by WPX and continue vertical delineation activities within the AOC. Mechanical equipment advanced one pothole (PH01) to a total depth of 21 feet bgs, which was driven by field screening soil samples for volatile organic compounds (VOCs) using a photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Soil samples were collected for laboratory analysis at 5-foot intervals starting at 0.5-foot bgs through 20 feet bgs and 21 feet bgs, where mechanical equipment limitations restricted further advancement. Field screening results and soil descriptions were denoted on a soil sampling log, which is included as **Attachment D**. The location of the delineation soil samples is shown in **Figure 3** in **Appendix A**. Photographic documentation during delineation activities is included in **Attachment B**.

On June 30, 2023, following the meeting and denial issued by NMOCD, Etech advanced two additional potholes (PH02 and PH03) with mechanical equipment equipped with greater vertical reach to further investigate vertical delineation within the AOC. Both potholes were advanced to a total depth of 21 feet bgs, which was driven by field screening soil samples for VOCs and chloride as previously described. Soil samples were collected for laboratory analyses representing the highest observed field screened concentrations and the greatest depth. Field screening results and soil descriptions were denoted on a soil sampling log, which is included as **Attachment D**. The location of the delineation soil samples was added to **Figure 3** in **Appendix A**. Photographic documentation during delineation activities is included in **Attachment B**.

Delineation soil samples were placed directly into lab provided pre-cleaned glass jars, packaged with minimal void space, labeled, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures, to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of COCs.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for PH01 and PH02 indicated BTEX and TPH concentrations were below the Site Closure Criteria. BTEX concentrations were also below the Site Closure Criteria for PH03. TPH concentrations exceeded Site Closure Criteria for the soil sample collected at 0.5-foot bgs from sampling location PH03.

Chloride concentrations for PH01 peaked at 15 feet bgs (1,940 mg/kg) and decreased more than 65 percent (%) with further advancement. Chloride concentrations for PH02 and PH03 peaked at 10 feet bgs (1,040 mg/kg and 975 mg/kg, respectively) and decreased below the Site Closure Criteria threshold with advancement.

Laboratory analytical results are summarized in Table 1 as **Attachment E**, and the complete laboratory reports with chain-of-custody documentation is included as **Attachment F**.

PROPOSED REMEDIATION WORK PLAN

Based on the delineation soil sampling results, the following conclusions regarding the release are presented:

- Based on laboratory analytical results, TPH concentrations exceeded Site Closure Criteria at 0.5-foot bgs from the area associated with PH03 location (302 mg/kg) but were below the laboratory detection threshold for soil samples collected below 4 feet bgs; and

- In general, chloride concentrations from delineation soil samples increased with depth between 10 and 15 feet bgs, then decreased with depth to 21 feet bgs where concentrations were below or slightly greater than Site Closure Criteria based on laboratory analytical results.

- BTEX and benzene concentrations were below the laboratory reporting limit for all analyzed soil samples.

Based on the conclusions drawn above, WPX proposes the following remedial corrective actions:

- WPX initially requested a variance to accept chloride concentrations from PH01 at 20 feet (624 mg/kg) and 21 feet bgs (654 mg/kg) for vertical delineation in the original RWP. Due to the minimal difference between the applied Closure Criteria for chloride and concentrations at the terminus of PH01 (elevated by 24 mg/kg and 54 mg/kg, respectively)

- WPX believes that the current delineation is equally protective to groundwater and human health as it would be otherwise, for the following reasons:

  i) WPX requests a variance to leave chloride impacts between 4 feet and 21 feet bgs in place, where concentrations are characterized between 1,940 mg/kg and 676 mg/kg. If WPX were to excavate to Closure Criteria with a potentially known shallow groundwater table, an excavation at such a depth could serve as a conduit to groundwater throughout the advancement of the excavation. The nearest permitted water well is NMOSE well L-15155 POD 1, located approximately 1,445 feet south of the Site, with a reported depth to groundwater of 35 feet bgs from 2021.

  ii) Two additional potholes to the east and west of PH01 were advanced to 21 feet bgs and provide further evidence of vertical delineation within the AOC. With similar soil profiles and chloride concentration trends with depth to PH01, chloride concentrations at PH02 and PH03 increased with depth to approximately 10 feet bgs before decreasing with depth. Chloride concentrations for both PH02 and PH03 terminus soil samples were below the Site Closure Criteria. Chloride concentration for PH01 terminus soil sample uncharacteristically increased from 624 mg/kg to 654 mg/kg, which may be attributed to cross contamination from the pothole sidewalls from shallow areas.

  iii) Additionally, the excavation footprint could potentially go beyond the proposed excavation extent to facilitate the proper safety measures required to excavate to Closure Criteria. As a result, un-impacted grounds would be excavated leading to a greater disruption of surface vegetation.

  iv) To minimize soil disturbance in order to mitigate impacts to groundwater and vegetation, WPX requests that the top four feet of impacted soil be excavated from the AOC and a 20-mil impermeable liner installed on the excavation floor. The liner will act as a physical barrier to mitigate further migration of chloride impacts into the subsurface. Removal

of the top four feet will address any hydrocarbon exceedances from PH03. The proposed excavation is presented on **Figure 4** in **Appendix A**. The excavation will extend laterally until confirmation soil sample results from the sidewalls of the excavation meet Closure Criteria and will provide horizontal delineation of the release. Confirmation sidewall soil samples will represent a maximum of 200 square feet per soil sample. Samples will be submitted for laboratory analyses of chloride, TPH and BTEX. Residual chloride impacts within the subject release area are defined by samples collected from PH01, PH02, and PH03 from depths ranging from 4 feet to 18 feet bgs. As a result, confirmation floor soil samples will not be collected.

v) Due to the proximity of the AOC to the southern pasture, there is potential for the lateral excavation extent to extend beyond the pad boundary. In such a case, access for remediation or disturbance that occurs offsite will require landowner approval with additional coverage. WPX will prepare and submit documentation for additional work areas before initiating corrective actions.

Once remediation is complete and receipt of soil confirmation results indicates impacted soil is removed, the excavation will be backfilled with clean, locally sourced soil and restored to “as close to its original state” as possible.

If you have any questions or comments, please do not hesitate to contact Joseph Hernandez at (281) 702-2329 or joseph@etechenv.com or Anna Byers at (575) 200-6754 or anna@etechenv.com.

Sincerely,

eTECH Environmental and Safety Solutions, Inc.

Anna Byers
Senior Geologist

Joseph S. Hernandez
Senior Managing Geologist

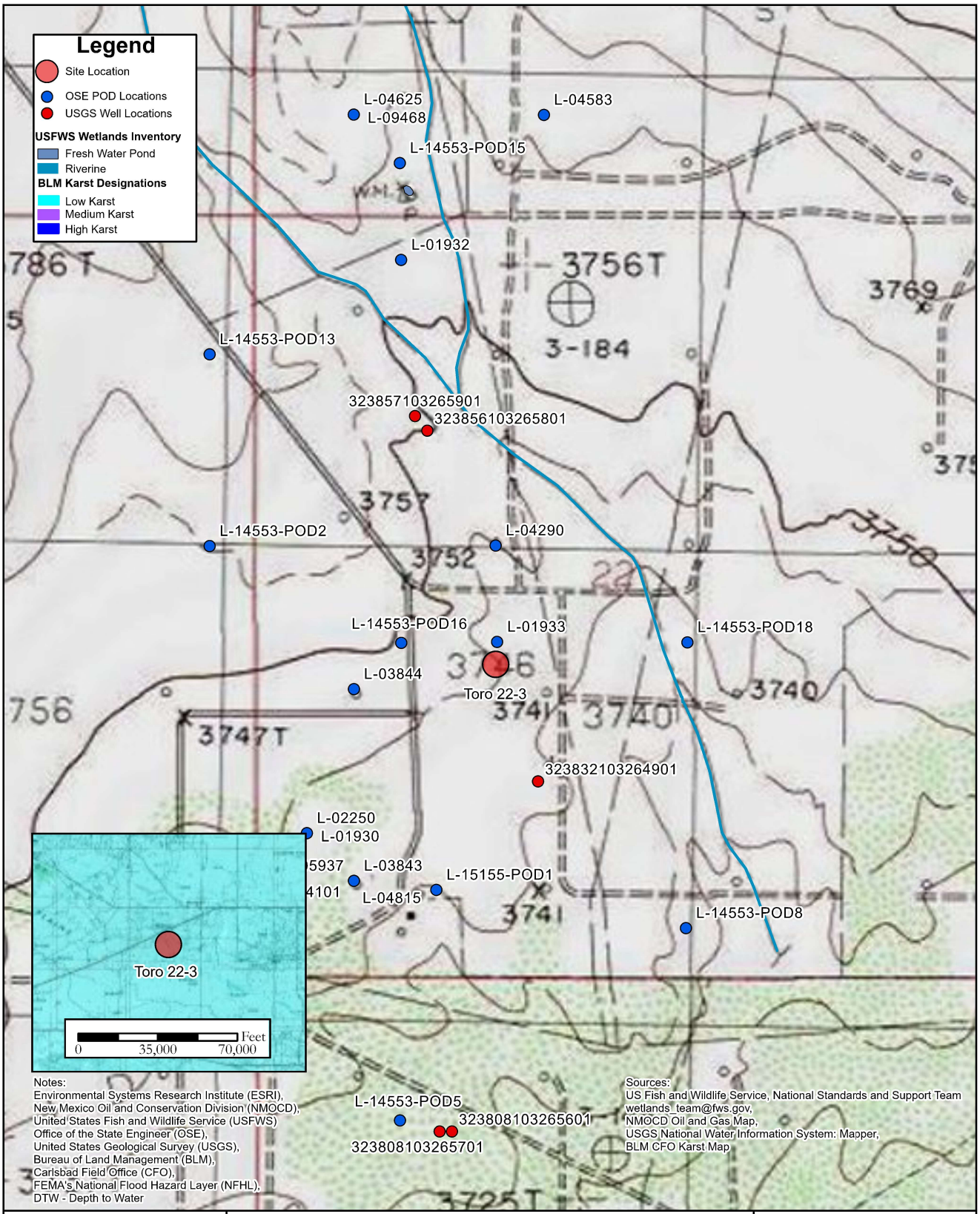
cc: Jim Raley, Devon
New Mexico Oil Conservation Division

Appendices:

Appendix A	Figure 1: Site Map
	Figure 2: Groundwater Well Field Verification
	Figure 3: Delineation Soil Sample Locations
	Figure 4: Proposed Excavation Area
Appendix B	Photographic Log
Appendix C	Referenced Well Records
Appendix D	Lithologic Sampling Logs
Appendix E	Tables
Appendix F	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix G	NMOCD Correspondence

APPENDIX A

Figures



eTECH

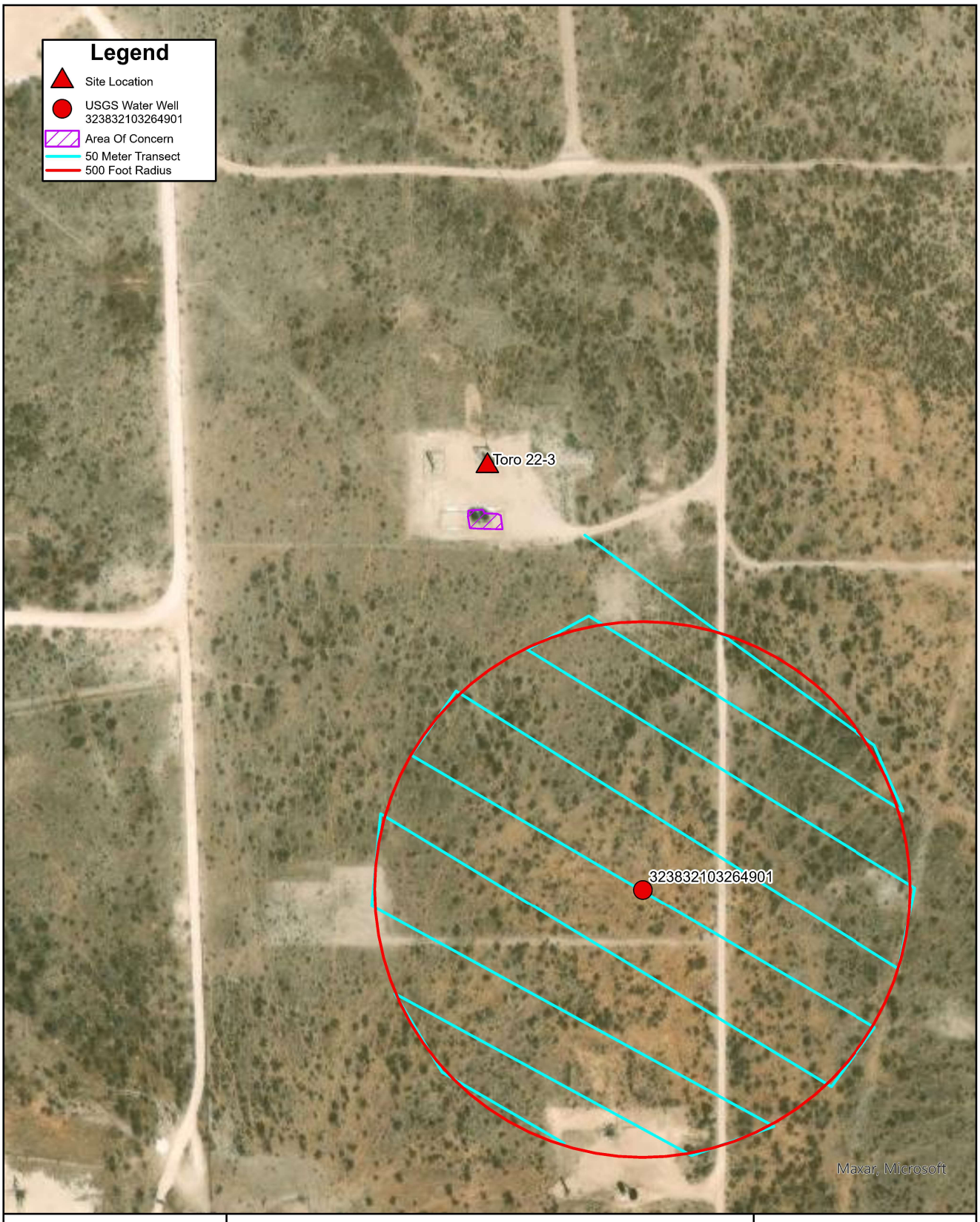
FIGURE 1

Site Map

WPX ENERGY PERMIAN, LLC
TORO 22-3
Unit K Sec 22 T19S 35E
Lea County, New Mexico

N

0 500 1,000 Feet



eTECH

FIGURE 2

Groundwater Well Field Verification

WPX ENERGY PERMIAN, LLC
TORO 22-3
Unit K Sec 22 T19S 35E
Lea County, New Mexico

N

0 375 750 Feet

eTECH

FIGURE 3

Delineation Soil Sample Locations

WPX ENERGY PERMIAN, LLC
TORO 22-3
Unit K Sec 22 T19S 35E
Lea County, New Mexico

N

0 30 60 Feet

eTECH

FIGURE 4

Proposed Excavation Area

WPX ENERGY PERMIAN, LLC
TORO 22-3
Unit K Sec 22 T19S 35E
Lea County, New Mexico

N

0 30 60 Feet

APPENDIX B

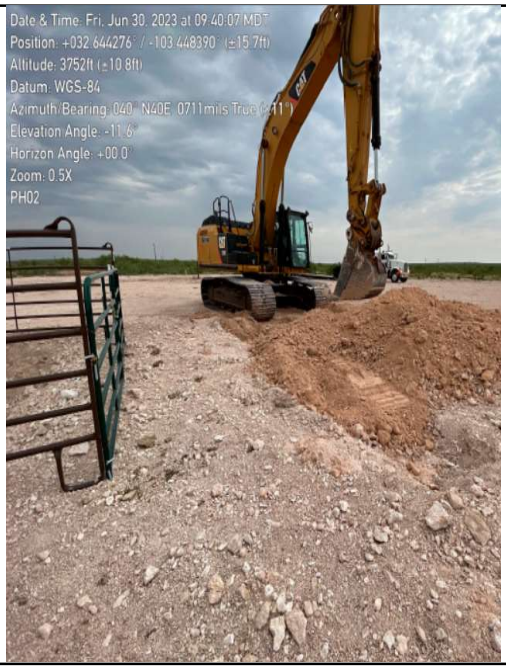
Photographic Log

PHOTOGRAPHIC LOG
WPX Energy Permian, LLC
Site Name: Toro 22-3
Incident Number: nOY1727952679

Photograph 1 **Date: 01/04/2023**
Description: View of the Site during delineation activies.

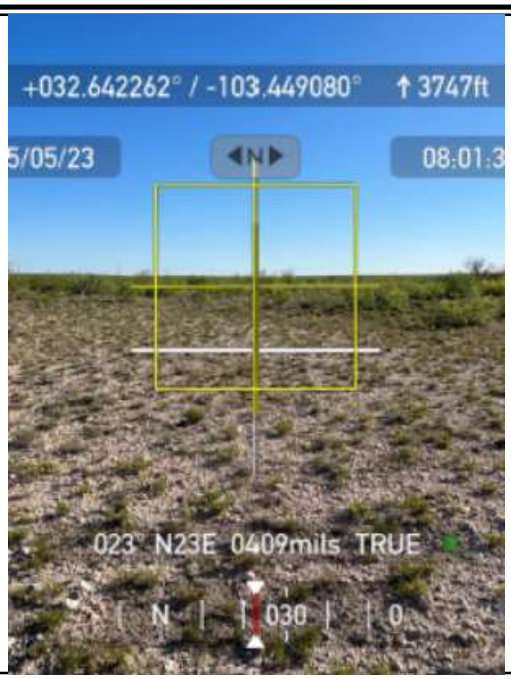
Photograph 2 **Date: 01/04/2023**
Description: View of the Site during delineation activites.

Photograph 3 **Date: 01/04/2023**
Description: View of the Site following delineation activites.



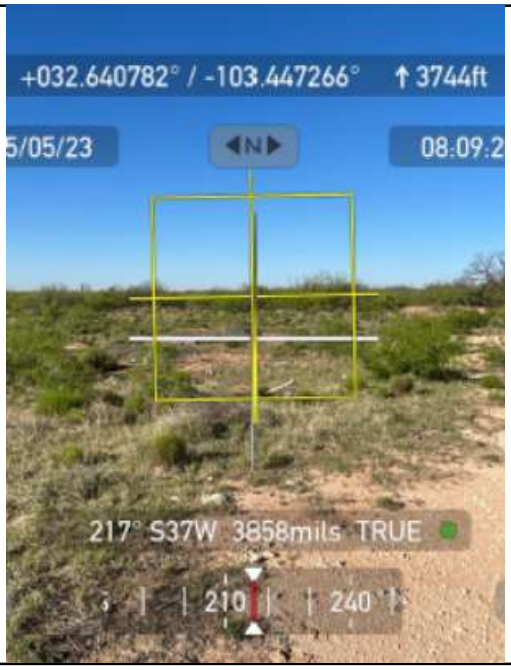
Photograph 4 **Date: 06/30/2023**
Description: View of the Site during delineation activities.

PHOTOGRAPHIC LOG
WPX Energy Permian, LLC
Site Name: Toro 22-3
Incident Number: nOY1727952679

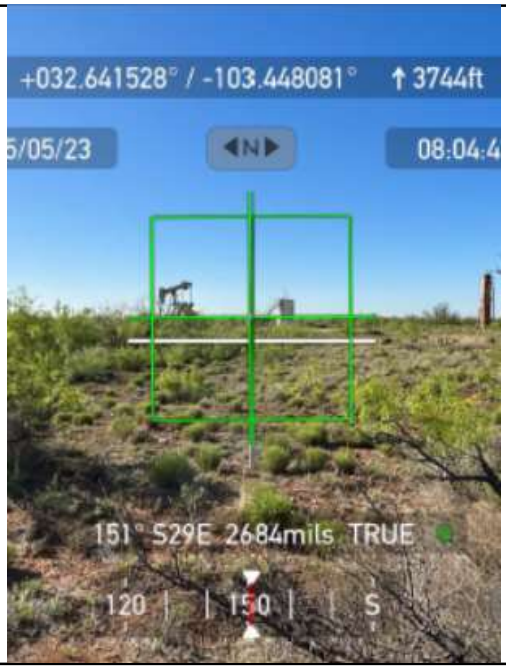


Photograph 5 **Date: 5/5/2023**
Description: Groundwater well field verification.

Photograph 6 **Date: 5/5/2023**
Description: Groundwater well field verification.



Photograph 7 **Date: 5/5/2023**
Description: Groundwater well field verification.



Photograph 8 **Date: 5/5/2023**
Description: Groundwater well field verification.

APPENDIX C

Referenced Well Records

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

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- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 323832103264901

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 323832103264901 19S.35E.22.14341

Lea County, New Mexico
Latitude 32°38'32", Longitude 103°26'49" NAD27
Land-surface elevation 3,742 feet above NAVD88
The depth of the well is 45 feet below land surface.
This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1963-03-19		D	62610		3723.94	NGVD29	1	Z			A
1963-03-19		D	62611		3725.50	NAVD88	1	Z			A
1963-03-19		D	72019	16.50			1	Z			A
1966-03-18		D	62610		3723.43	NGVD29	1	Z			A
1966-03-18		D	62611		3724.99	NAVD88	1	Z			A
1966-03-18		D	72019	17.01			1	Z			A
1971-01-27		D	62610		3723.76	NGVD29	1	Z			A
1971-01-27		D	62611		3725.32	NAVD88	1	Z			A
1971-01-27		D	72019	16.68			1	Z			A
1976-01-29		D	62610		3724.17	NGVD29	1	Z			A
1976-01-29		D	62611		3725.73	NAVD88	1	Z			A
1976-01-29		D	72019	16.27			1	Z			A
1981-01-23		D	62610		3723.90	NGVD29	1	Z			A
1981-01-23		D	62611		3725.46	NAVD88	1	Z			A
1981-01-23		D	72019	16.54			1	Z			A
1986-02-04		D	62610		3723.90	NGVD29	1	Z			A
1986-02-04		D	62611		3725.46	NAVD88	1	Z			A
1986-02-04		D	72019	16.54			1	Z			A
1991-04-17		D	62610		3723.62	NGVD29	1	Z			A
1991-04-17		D	62611		3725.18	NAVD88	1	Z			A
1991-04-17		D	72019	16.82			1	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988

Section	Code	Description
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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

Accessibility FOIA Privacy Policies and Notices

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

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2023-05-11 16:40:27 EDT
0.29 0.26 nadww01

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
L- 15155 POD 1	20EC2	L- 15155 POD 1

WELL OWNER NAME(S)	PHONE (OPTIONAL)
George L. Klein L&K Ranch LLC	214 738 2046

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
PO Box 1503	Hobbs	NM	88241-1503

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	38	25	N
	LONGITUDE	-103	26	59	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NESESWSW Sec 22 T 19S R 35E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1626	Roy Taylor	Roy Taylor Drilling

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
11/19/2021	11/19/2021	69'	69'	35'

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 35'

DRILLING FLUID: ☐ AIR ☑ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	29'	12 1/4"	PVC	Glue	6.115	.255	NA
29'	69'	12 1/4"	PVC	Glue	5.993	.316	.032

OSE DII DEC 7 2021 PM1:35

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	20'	12 1/4"	Bentonite	11.78	Pourded
20'	29'	12 1/4"	Gravel	5.3	Pourded
29'	69'	12 1/4"	8/16 Silica Sand	23.53	Pourded

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO. L-15155	POD NO. 1	TRN NO. 696567	
LOCATION 19S-35E-22 3.3.4		WELL TAG ID NO. 20EC2	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	1'	1'	Top Soil	Y ✔ N	
1'	10'	9'	Caliche	Y ✔ N	
10'	15'	5'	Rock	Y ✔ N	
15'	35'	20'	Sand Stone	✔ Y N	
35'	50'	15'	Sand	✔ Y N	
50'	69'	19'	Red Clay	Y ✔ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

OSE DIT DEC 7 2021 PM1:36

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.

Roy Taylor — Roy Taylor — 12/5/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 04/30/2019)

FILE NO. L-15155	POD NO. 1	TRN NO. 696561	
LOCATION 19S.35E.22	3.3.4	WELL TAG ID NO. 20EC2	PAGE 2 OF 2

~~7056~~ 4931/62

1961 JAN 18 AM 8:27
STATE ENGINEER OFFICE
DISTRICT II
ROSWELL, N. MEX.

WR-15

IMPORTANT—READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

APPLICATION FOR PERMIT

To Appropriate the Underground Waters of the State of New Mexico

LEA COUNTY UNDERGROUND BASIN

Application No. L-4290 Book LC-17 Date Received October 2, 1959

1. Name of applicant C. W. TRAINER
   Postoffice address P. O. Box 2222; City or Town Hobbs,
   County of Lea, State of New Mexico,
2. Source of water supply Shallow ground water basin,
   (state whether artesian or shallow ground water basin)
   located in Lea County Underground Basin,
   (name of underground stream, valley, artesian basin, etc.)
3. The well is to be located in the SW/4 ¼, SE/4 ¼, NW/4 ¼,
   of section 22, Township 19 South, Range 35 East, N.M.P.M.
   on land owned by State of New Mexico
4. Description of well: driller Ed Burke; W.D. No. 111; depth to be drilled 50 feet;
   diamenter (outside) of casing 7 inches; type of pump and power plant to be used
   Pump jack with industrial engine
5. Quantity of water to be appropriated and beneficially used three (3)
   (feet depth or acre feet per acre)
   for Oil well drilling purposes.
6. Acreage to be irrigated None acres
   located and described as follows (describe only lands to be irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner

(Note: location of well and acreage to be irrigated must be shown on plat on reverse side.)

1961 JAN 20 AM 8:39
STATE ENGINEER OFFICE
SANTA FE, N. M.

7. Time required to commence construction as soon as possible;
   Time required to complete the works 1 year;
   Time required to fully apply water to beneficial use not required
8. Additional statements or explanations (including data on any other water rights appurtenant to above lands)
   Signal State No. 1
   This corrected Application is being filed to
   show the location of the well in the proper place.

I, C. W. TRAINER, being first duly sworn upon my oath, depose and say that I have carefully read the foregoing statement and each and all of the items contained therein, and that the same are true to the best of my knowledge and belief.

C W Trainer, applicant

Subscribed and sworn to before me this 17th day of January, A. D., 19 61

My Commission expires January 23, 1963 Virginia G Terry
Notary Public.

APPROVAL OF THE STATE ENGINEER

Number of this permit L-4290 Date received corrected

Recorded in Book LC-17 Publication of notice ordered

Page 4290 Name of paper

Application received January 18, 1961 Affidavit of publication filed

Date returned for correction Date of approval January 19, 1961

This application is approved for 3 acre feet of water p[illegible]nu[illegible]

subject to all prior valid and existing rights to the use of the waters of said underground source and provided that the applicant complies with all rules and regulations of the State Engineer pertaining to the drilling of wells

This is a corrective application to correct well location to where actually drilled.

Works shall be completed and proofs filed on or before

Water shall be applied to beneficial use and proofs filed on or before

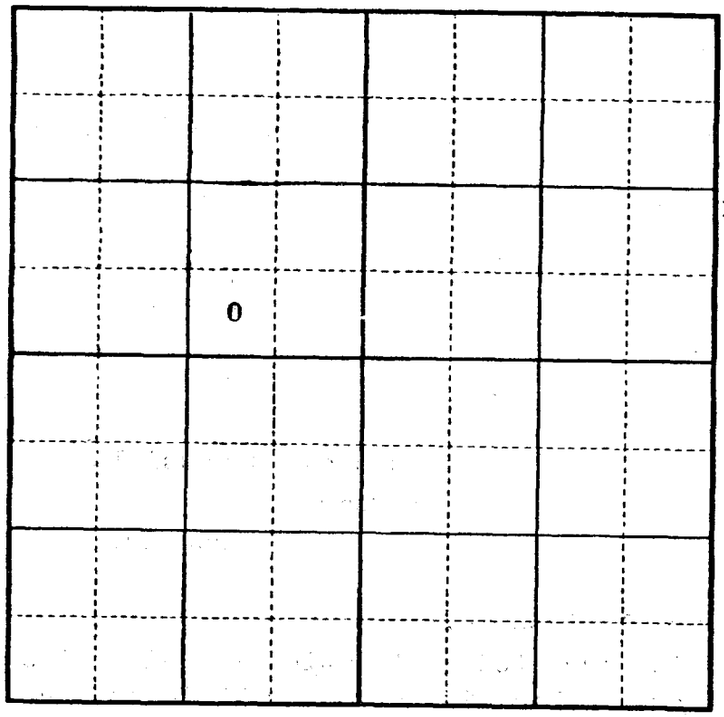
This is to certify that I have examined the above application for permit to appropriate the underground waters of the State of New Mexico and hereby approve the same subject to the foregoing provisions and conditions.

Witness my hand and seal this 19th day of January, A. D., 19 61.

S. E. Reynolds
State Engineer

LOCATE WELL AND ACREAGE TO BE IRRIGATED AS ACCURATELY AS POSSIBLE ON FOLLOWING PLAT:

Section 22, Township 19-South, Range 35-East, N.M.P.M.



By Delbert W. Nelson
Delbert W. Nelson
Office Supervisor
District II

INSTRUCTIONS

This form shall be executed, preferably typewritten, in triplicate and shall be accompanied by a filing fee of $5.00. Each of triplicate copies must be properly signed and attested.

A separate application for permit must be filed for each well used.

Secs. 1-4—Fill out all blanks fully and accurately.

Sec. 5—Irrigation use shall be stated in feet depth or acre feet of water per acre to be applied on the land. If for domestic, municipal, or other purposes, state total quantity in acre feet to be used annually. Domestic use may include the irrigation of not more than one acre of lawn and garden for noncommercial use.

Sec. 6—Describe only the lands to be irrigated. If on unsurveyed lands describe by legal subdivision "as projected" from the nearest government survey corners, or describe by metes and bounds and tie survey to some permanent, easily located natural object.

Sec. 7—Estimate time reasonably required to commence and to complete project.

Sec. 8—If lands are irrigated from any other source, explain in this section. Give any other data necessary to fully describe water right sought.

If additional space is necessary, use a separate sheet or sheets and attach securely hereto.

205634

4931 62

WR-15

IMPORTANT—READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

1959 OCT -2 AM 8:45
STATE ENGINEER OFFICE
DISTRICT II
ROSWELL, N. MEX.

APPLICATION FOR PERMIT

To Appropriate the Underground Waters of the State of New Mexico

LEA COUNTY UNDERGROUND BASIN

Application No. L-4290 **Book** LC-17 **Date Received** October 2, 1959

1. **Name of applicant** C. W. Trainer
Postoffice address Box 2222 ; **City or Town** Hobbs,
County of Lea , **State of** New Mexico,

2. **Source of water supply** shallow ground water basin,
(state whether artesian or shallow ground water basin)
located in Lea County Underground Basin,
(name of underground stream, valley, artesian basin, etc.)

3. **The well is to be located in the** SE ¼, SW ¼, NE ¼,
of section 22 , **Township** 19 South , **Range** 35 East , **N.M.P.M.**
on land owned by State of New Mexico

4. **Description of well: driller** Ed Burke ; **W.D. No.** 111 ; **depth to be drilled** 50 **feet;**
diamenter (outside) of casing 7 **inches; type of pump and power plant to be used**
Pump jack with industrial engine

5. **Quantity of water to be appropriated and beneficially used** three (3)
(feet depth or acre feet per acre)
for Oil well drilling **purposes.**

6. **Acreage to be irrigated** none **acres**
located and described as follows (describe only lands to be irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner

1959 OCT -7 PM 1:53
STATE ENGINEER OFFICE
SANTA FE, N.M.

(Note: location of well and acreage to be irrigated must be shown on plat on reverse side.)

7. **Time required to commence construction** as soon as possible ;
Time required to complete the works 1 year ;
Time required to fully apply water to beneficial use not required

8. **Additional statements or explanations (including data on any other water rights appurtenant to above lands)**
Signal State No. 1

I, C. W. Trainer , **being first duly sworn upon my oath, depose and say that I have carefully read the foregoing statement and each and all of the items contained therein, and that the same are true to the best of my knowledge and belief.**

C. W. Trainer , **applicant**
by: Edward R. Burke

Subscribed and sworn to before me this 22 **day of** September , **A.D., 1959**

My Commission expires April 13, 1963

Evelyn J. Bridgforth
Notary Public.

APPROVAL OF THE STATE ENGINEER

Number of this permit L-4290 Date received corrected

Recorded in Book LC-17 Publication of notice ordered

Page 4290 Name of paper

Application received October 2, 1959 Affidavit of publication filed

Date returned for correction Date of approval October 5, 1959

This application is approved for 3 acre feet of water subject to all prior valid and existing rights to the use of the waters of said underground source and provided that the applicant complies with all rules and regulations of the State Engineer pertaining to the drilling of wells (1) Casing not to exceed 7 inch OD and depth not to exceed depth of the ogallala. (2) Appropriation not to exceed 3 acre feet per acre for domestic and oil well drilling operations. (3) Well to be plugged upon completion of oil well drilling operations and plugging report to be filed on or before one year from the date of approval of this permit.

Plugging record to be filed on or before October 5, 1960

~~Work shall be completed and proofs filed on or before~~

Water shall be applied to beneficial use and proofs filed on or before

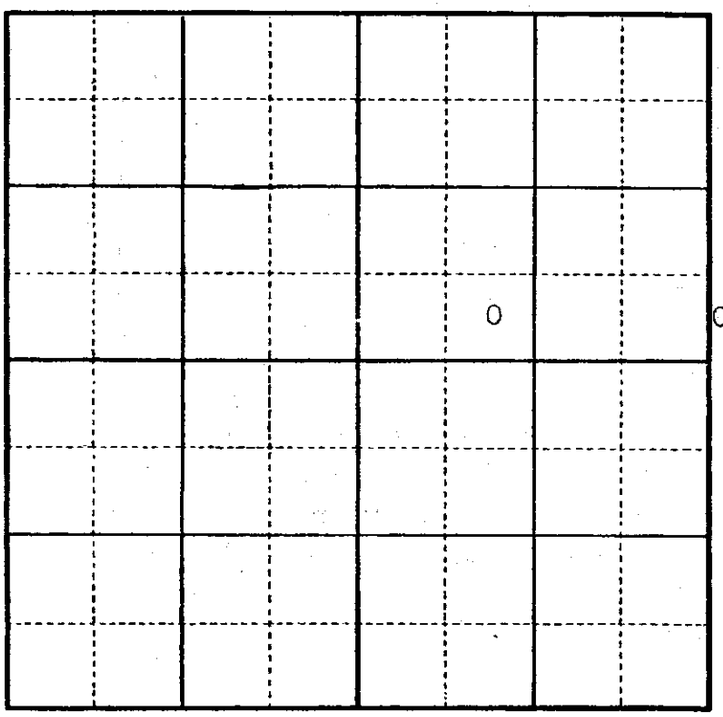
This is to certify that I have examined the above application for permit to appropriate the underground waters of the State of New Mexico and hereby approve the same subject to the foregoing provisions and conditions.

Witness my hand and seal this 5th day of October, A. D., 19 59.

S. E. Reynolds
State Engineer

LOCATE WELL AND ACREAGE TO BE IRRIGATED AS ACCURATELY AS POSSIBLE ON FOLLOWING PLAT:

Section (s) 22, Township 19 South, Range 35 East, N.M.P.M.



By Delbert W. Nelson
Delbert W. Nelson
Office Supervisor
District II

INSTRUCTIONS

This form shall be executed, preferably typewritten, in triplicate and shall be accompanied by a filing fee of $5.00. Each of triplicate copies must be properly signed and attested.

A separate application for permit must be filed for each well used.

Secs. 1-4—Fill out all blanks fully and accurately.

Sec. 5—Irrigation use shall be stated in feet depth or acre feet of water per acre to be applied on the land. If for domestic, municipal, or other purposes, state total quantity in acre feet to be used annually. Domestic use may include the irrigation of not more than one acre of lawn and garden for noncommercial use.

Sec. 6—Describe only the lands to be irrigated. If on unsurveyed lands describe by legal subdivision "as projected" from the nearest government survey corners, or describe by metes and bounds and tie survey to some permanent, easily located natural object.

Sec. 7—Estimate time reasonably required to commence and to complete project.

Sec. 8—If lands are irrigated from any other source, explain in this section. Give any other data necessary to fully describe water right sought.

If additional space is necessary, use a separate sheet or sheets and attach securely hereto.

WR-15

IMPORTANT—READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

1961 JAN 12 AM 8:25 STATE ENGINEER OFFICE DISTRICT II ROSWELL, N. MEX.

APPLICATION FOR PERMIT

To Appropriate the Underground Waters of the State of New Mexico

LEA COUNTY UNDERGROUND WATER BASIN

Application No. L-4290 Book LC-17 Date Received January 9, 1961

1. Name of applicant C. W. TRAINER

Postoffice address P. O. Box 2222; City or Town Hobbs,

County of Lea, State of New Mexico,

2. Source of water supply Shallow
(state whether artesian or shallow ground water basin)

located in Lea County underground basin
(name of underground stream, valley, artesian basin, etc.)

3. The well is to be located in the SW/4 ¼, SE/4 ¼, NW/4 ¼,

of section 22, Township 19-South, Range 35-East, N.M.P.M.

on land owned by State of New Mexico

4. Description of well: driller Ed Burk; W.D. No. 111; depth to be drilled 45 feet;

diamenter (outside) of casing 7" inches; type of pump and power plant to be used

Turbine - Probably with electric motor

5. Quantity of water to be appropriated and beneficially used 100 net acre feet per annum
(feet depth or acre feet per acre)

for Water Flood of Pearl Queen Field - T-19S, R-35E purposes.

6. Acreage to be irrigated None acres

located and described as follows (describe only lands to be irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner

1966 JAN 16 AM 9:48 STATE ENGINEER OF N.M. SANTA FE, N.M.

State of New Mexico
Office of State Engineer

Whereas, the rights under this filing have lapsed and notice having been given as per the Rules and Regulations of the State Engineer, this permit No. L-4290 is hereby cancelled this 5th day of July A. D. 1966

S. E. REYNOLDS, State Engineer

By Frank E. Irby
Chief, Water Rights Division

(Note: location of well and acreage to be irrigated must be shown on plat on reverse side.)

1966 JAN 9 AM 9:48 STATE ENGINEER OFFICE ROSWELL, N. MEX. FILED

7. Time required to commence construction 1 year;

Time required to complete the works 2 years;

Time required to fully apply water to beneficial use 2 years

8. Additional statements or explanations (including data on any other water rights appurtenant to above lands)

We have filed Application No. L-4290, Book LC-17, October 2, 1959, for this water well and we used it for drilling our oil wells on this same Section. Log is on file.

1966 JAN 22 AM 8:15 STATE ENGINEER OF N.M. SANTA FE, N.M. FILED IN ROSWELL

I, C. W. TRAINER, being first duly sworn upon my oath, depose and say that I have carefully read the foregoing statement and each and all of the items contained therein, and that the same are true to the best of my knowledge and belief.

C. W. Trainer, applicant

Subscribed and sworn to before me this 6th day of January, A. D., 1961

My Commission expires January 23, 1963

Virginia G. Berry
Notary Public.

1966 JAN 9 AM 9:48 STATE ENGINEER OF N.M. SANTA FE, N.M. FILED IN ROSWELL

1966 JUL 6 AM 8:17 STATE ENGINEER OFFICE ROSWELL, N. MEX. FILED IN DISTRICT II

APPROVAL OF THE STATE ENGINEER

Number of this permit _____ Date received corrected _____

Recorded in Book _____ Publication of notice ordered Jan. 19, 1961

Page _____ Name of paper Hobbs Daily News-Sun

Application received January 9, 1961 Affidavit of publication filed February 9, 1961

Date returned for correction _____ Date of approval May 21, 1962

This application is approved for 100 acre feet of water subject to all prior valid and existing rights to the use of the waters of said underground source and provided that the applicant complies with all rules and regulations of the State Engineer pertaining to the drilling of wells

1. Appropriation limited to 100 acre feet per annum from all sources combined.
2. A totalizing meter approved by the State Engineer shall be installed and readings shall be submitted to the Roswell Office for each calendar month, on or before the 30th day of the following month.
3. Depth of well in no event to exceed the depth of the ogallala above the red bed or other underlying formation.

Works shall be completed and proofs filed on or before _____

Water shall be applied to beneficial use and proofs filed on or before May 31, 1966

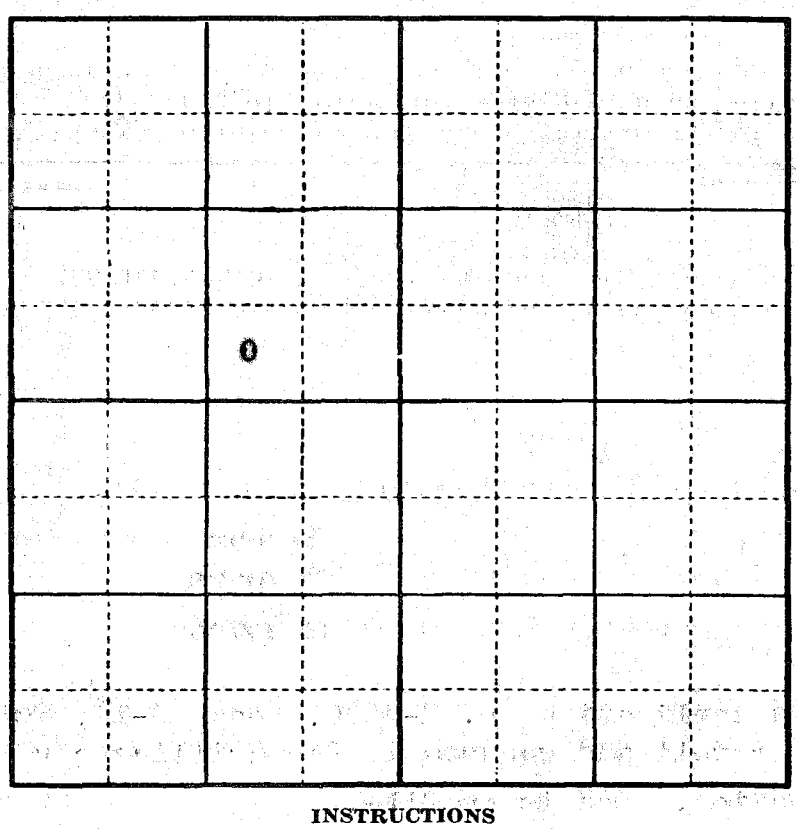
This is to certify that I have examined the above application for permit to appropriate the underground waters of the State of New Mexico and hereby approve the same subject to the foregoing provisions and conditions.

Witness my hand and seal this 21st day of May, A. D., 19 62.

S. E. Reynolds
State Engineer

LOCATE WELL AND ACREAGE TO BE IRRIGATED AS ACCURATELY AS POSSIBLE ON FOLLOWING PLAT:

Section (s) 22, Township 19-South, Range 35-East, N.M.P.M.



BY D. E. Gray
D. E. Gray, Engineer
Water Rights Division

INSTRUCTIONS

This form shall be executed, preferably typewritten, in triplicate and shall be accompanied by a filing fee of $5.00. Each of triplicate copies must be properly signed and attested.

A separate application for permit must be filed for each well used.

Secs. 1-4—Fill out all blanks fully and accurately.

Sec. 5—Irrigation use shall be stated in feet depth or acre feet of water per acre to be applied on the land. If for domestic, municipal, or other purposes, state total quantity in acre feet to be used annually. Domestic use may include the irrigation of not more than one acre of lawn and garden for noncommercial use.

Sec. 6—Describe only the lands to be irrigated. If on unsurveyed lands describe by legal subdivision "as projected" from the nearest government survey corners, or describe by metes and bounds and tie survey to some permanent, easily located natural object.

Sec. 7—Estimate time reasonably required to commence and to complete project.

Sec. 8—If lands are irrigated from any other source, explain in this section. Give any other data necessary to fully describe water right sought.

If additional space is necessary, use a separate sheet or sheets and attach securely hereto.

MEMORANDUM OF RECOMMENDATIONS

FILE NO: L-4290 DATE: May 13, 1966

TO: Frank E. Irby, Chief, Water Rights Division

FROM: Fred H. Hennighausen, Supervisor, District II

SUBJECT: Cancellation of Permit No. L-4290

APPLICANT: C. W. Trainer

WELL:

SUBDIVISION	SECTION	TOWNSHIP	RANGE
SW¼SE¼NW¼	22	19 S.	35 E.

USE: Water flood of Pearl Queen Field in Township 19 South, Range 35 East.

REASON: Applicant states: "I am going to let this expire on May 31."

CONSIDERATIONS: Permit No. L-4290 was approved May 21, 1962 for 100 acre feet to be used for the secondary recovery of oil.

Well No. L-4290 was an existing well.

The applicant returned our letter of April 8, 1966 with a notation that he will let the permit expire on May 31, 1966.

RECOMMENDATIONS: It is recommended that Permit No. L-4290 be cancelled at the request of the applicant.

Fred H. Hennighausen
District II Supervisor

ECB*jl
encl.

MEMORANDUM OF RECOMMENDATIONS

FILE NO: L-4290 DATE: May 18, 1962

TO: Frank E. Irby, Chief, Water Rights Division

FROM: Fred H. Hennighausen, Supervisor, District II

SUBJECT: Application to appropriate shallow waters for water-flood purposes No. L-4290.

WELL:

SUBDIVISION	SECTION	TOWNSHIP	RANGE
SW¼SE¼NW¼	22	19-S	35-E

REASON: Water Flood of Pearl Queen Field - Township 19 South, Range 35 East.

CONSIDERATIONS:

1. According to the priority sheet and Yates' figure of available water, Township 19 South, Range 35 East has 133 acre feet of available water before reservation for L-4290.

2. Application L-4815 is also pending, however, this application was filed after application L-4290. There are no other applications pending in this township and range.

3. According to the attached inter-office memorandum dated February 23, 1961, a well in this area may be expected to produce 10-150 gallons per minute which is sufficient for the appropriation requested.

4. Affidavit of publication and application were forwarded to the Santa Fe office February 29, 1961. Engineering report previously sent to Santa Fe included Files L-4577 through L-4577-X-3, which have been withdrawn, and the applicant has filed a new report for application L-4290.

5. There are no other permits for the secondary recovery of oil that include the W½NE¼ & E½NW¼ of Section 22, Township 19 South, Range 35 East.

RECOMMENDATIONS: Approval is recommended.

Fred H. Hennighausen
Supervisor, District II

ECB*jd
encl.

C. W. TRAINER

P. O. BOX 2222 PHONE EX 7-1518

205 NORTH LINAM STREET

HOBBS, NEW MEXICO

April 30, 1962

New Mexico State Engineer
P. O. Box 1717
Roswell, New Mexico

Re: File L-4290
Your letter of April 27, 1962

Attention: E. C. Barry

Dear Mr. Barry:

I submit this engineering report to supplement my letter of April 27, 1961, as you requested. It is intended to limit and justify the 100 acre feet per annum for use on my four wells in the N/2, Sec. 22-19S-35E and any necessary offset wells to mine.

1. The anticipated quantity of oil that will be recovered from my four wells as a result of this flood is 400,000 barrels.
2. The estimated quantity of water that will be required to complete this waterflood is 900 acre feet.
3. There will probably be 2 injections wells on my lease and 4 offsets.
4. The maximum anticipated rate of injection per well is 620 barrels per day.
5. The maximum estimated quantity of water to be used in a 12 month period is 100 acre feet.
6. Estimated total water that will be recovered and reinjected is 150 acre feet.
7. Pearl Queen only.
8. My leases are E/2 NW/4 and W/2 NE/4, Sec. 22-19S-35E. Of course, offsetting injection wells must be considered.
9. The primary use of this water will be for my own leases and those adjacent to mine.
10. The nearest available salt water is 10 miles east, or perhaps 5 miles north.
11. Answered in 8 above.
12. None of this water is to be used for domestic purposes.

I trust this is the information you require.

Yours very truly,

C. W. Trainer

CWT:vp

October 17, 1961

Gene Gray

Fred H. Hennighausen

File No. L-4290

Field check of October 12, 1961, disclosed that Well L-4290 was not in use and that a steel cap has been welded over the well casing.

Fred H. Hennighausen
Supervisor, District II

ECB*jd

ROUTING SLIP

To: Field Supervisor (Basin) or (County) L-4290

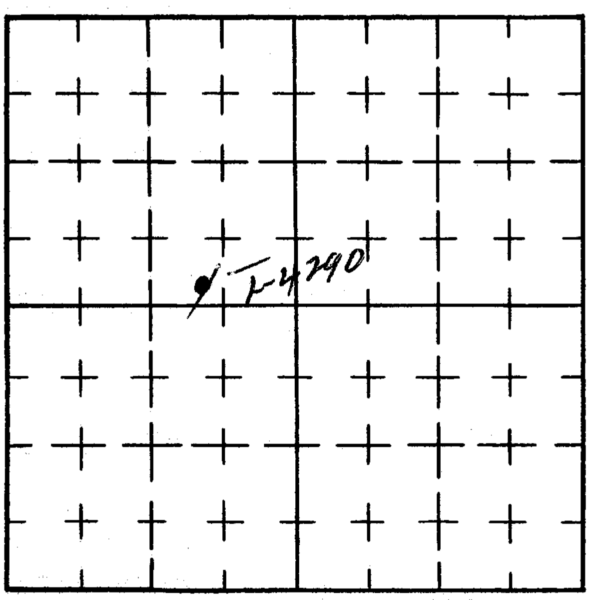
From: P Massey Applicant Trainer

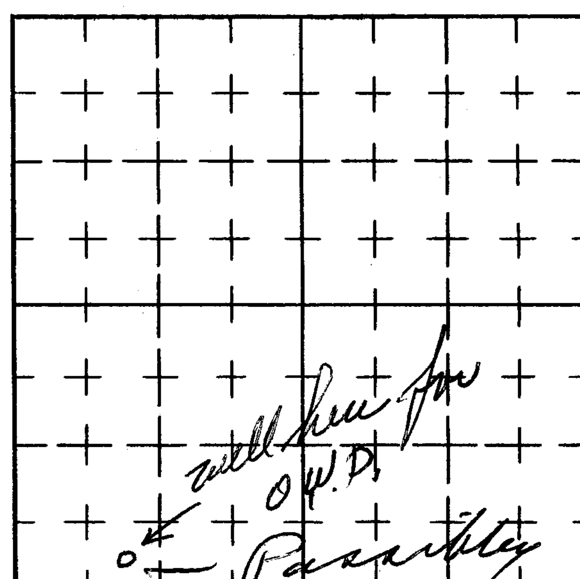
Land Location

Field Check Requested For the Following Reasons Date: 10-9-61

- Proof of Completion of Works ☐
- Proof of Beneficial Use ☐
- Declaration ☐
- Extension of Time ☐
- Illegal Irrigation ☐
- Supplemental Well ☐
- Leakage Test ☐
- Cementing (water-oil) ☐
- Reduction from Irr. or Dom. ☐
- Pressure Test ☐
- Inspect Casing ☐
- Others Check Use ☐

Sec. 22 T. 19 R 35 Sec. 15 T. 19 R. 35





L-4583 Should be SE4SW;

Old Well (plugged-retained-reduced)

REMARKS: Well L-4290 is capped and is not being used for any purpose.

a well located in the SE SW SW of Sec 15 was being used for oil well drilling. This well is located 150' east of windmill & permit L4625 as SW4 SW4 — Vaughl Linam (est)

Gackle Drilling co Should be 4583 as SE4SW4 ECB

Date: 10/12/61 By: James D Wright

File No. L-4290 Location No.

WR-36

FIELD REPORT FOR CEMENTING OF WELLS

Name of Applicant _____

Name of Well _____

Driller's Name _____

Drilling Method _____

CASING DATA:
Surface _____ feet of _____ inch. Grade _____

Inspected by _____ on _____

(Approved)(Rejected) _____

Water string _____ feet of _____ inch. Grade _____

Inspected by _____ on _____

(Approved)(Rejected) _____

Oil string _____ feet of _____ inch. Grade _____

Inspected by _____ on _____

(Approved)(Rejected) _____

CEMENTING PROGRAM:
Cemented by _____ Supervised by _____

Type of shoe used _____ Float collar used _____

Bottom three joints welded _____ Cement: around shoe _____ sks. _____

around casing _____ sks. _____ Additives _____

_____ _____ _____

Size of hole _____ Size of casing _____ sks. of cement required ____

Plug pumped down _____ (a.m.)(p.m.) _____

Cement circulated _____ No. of sacks _____

Temp. survey ran _____ (a.m.)(p.m.) _____ Cement at _____ feet

Temp. survey ran _____ (a.m.)(p.m.) _____ Cement at _____ feet

Checked for shut off _____ (a.m.) (p.m.) _____

Method used _____ Supervised by _____

Checked for shut off _____ (a.m.) (p.m.) _____

Method used _____ Supervised by _____

REMARKS: _____

_____

_____

_____

_____

_____

_____

Job approved by _____

File No. _____ _____ Location No. _____

STATE ENGINEER O. ICE
MEMO

DATE 10-3-61

TO: Barry

( ) For Your Information ( ) Note & Return

( ) For Your Files ( ) Circulate

(X) For Your Handling ( ) _____

REMARKS: A review of this file indicates that L-4290 should have been plugged 10-5-60. There is nothing in our file to show that Traines has the right to use this well for oil well drilling purposes during 1961. Please advise

Gene

C. W. TRAINER
P. O. BOX 2332 PHONE EX. [illegible]
205 NORTH LINAM STREET
HOBBS, NEW MEXICO

1961 APR 28 AM 8:01

April 27, 1961

State Engineer Office
P. O. Box 810
Roswell, New Mexico

Re: Files L-4290; L-4577; L-4577-X;
L-4577-X-2; L-4577-X-3
Your letter of February 27, 1961

Attention: Mr. E. C. Barry

Gentlemen:

The following answers are submitted in answer to the questions asked in the captioned letter.

1. The anticipated quantity of oil that will be recovered as a result of this flood is 12,000,000 barrels.
2. The estimated quantity of water that will be required to complete this waterflood is 60,000,000 barrels or 7800 acre feet.
3. There will probably be about 65 injection wells ultimately.
4. The maximum anticipated rate of injection per well is 620 barrels per day.
5. The maximum estimated quantity of water to be used in a 12 month period is 1940 acre feet. Since my applications only cover 600 acre feet, the answer to this question is 600 acre feet.
6. Estimated total water that will be recovered and reinjected is 10,000,000 barrels and this is really a guess. You can see from 5 above though that we will want to reuse all we can.
7. Pearl Queen only.
8. This field is located in Township 19-South, Range 35-East, Sections 15, 21, 22, 27, 28, 29, 30, 31, 32, 33, and 34; Township 19-South, Range 34-East, Sections 25 and 36; Township 20-South, Range 35-East, Sections 3, 4, 9, and 10.

9. No commitments to date, but I have 8 producing wells in this field and plan to drill about 4 more this year. Shell is making a study now to determine when we should begin a pilot flood.
10. Shell is reinjecting their salt water now, about 500 barrels per day as a combination disposal, repressuring project. The nearest available salt water in any quantity is in the Monument Field about 10 miles east of Pearl.
11. Answered in 8 above.
12. None of the water appropriated under these applications is to be used for domestic purposes.

I trust this answers all your questions. If I can be of any further help, please advise.

Yours very truly,

C. W. Trainer

CWT:vp

Roswell , New Mexico

WR–20
(Rev. 9/58)

Mr. C. W. Trainer
P. O. Box 2222
Hobbs, New Mexico

Dear Sir:

The following notice shall be published at applicant's expense once a week for three (3) consecutive weeks in the

Hobbs Flare or Hobbs Daily News-Sun a newspaper published at

Hobbs , New Mexico, or in any other newspaper of general circulation in the county wherein the proposed well will be located. First publication should be made within ten (10) days from the date hereon, Publisher's affidavit of proof of such publication must be filed with the State Engineer not later than ten (10) days from the date of last publication. Failure to file proof of publication within the time allowed will render the application subject to cancellation.

The accuracy as to the content of this Notice is the responsibility of the applicant and the State Engineer is not obligated for any additional expense incurred by the necessity of readvertisement.

Neither issuance of this Notice, nor lack of protest thereto, in any way indicates favorable action by the State Engineer or approval of the application as requested.

Basin Supervisor

NOTE TO PUBLISHER: Immediately after last publication, publisher is requested to file affidavit of proof of such publication with the State Engineer, P. O. Box 810 , Roswell , New Mexico.

NOTICE

State Engineer's Office

Number of Application L-4290 Roswell , N. M., January 19 , 19 61

Notice is hereby given that on the 9th day of January , 19 61 , in accordance with Chapter 131 of the Session Laws of 1931, C. W. Trainer

of Hobbs County of Lea

State of New Mexico , made application to the State Engineer of New Mexico for a permit to appropriate 100 acre feet per annum of the Lea County Underground Water Basin by commencing the use of existing well No. L-4290 located at a point in the SW¼SE¼NW¼ of Section 22, Township 19 South, Range 35 East, N.M.P.M., to be used for the secondary recovery of oil by waterflooding in the Pearl Queen Field, Township 19 South, Range 35 East.

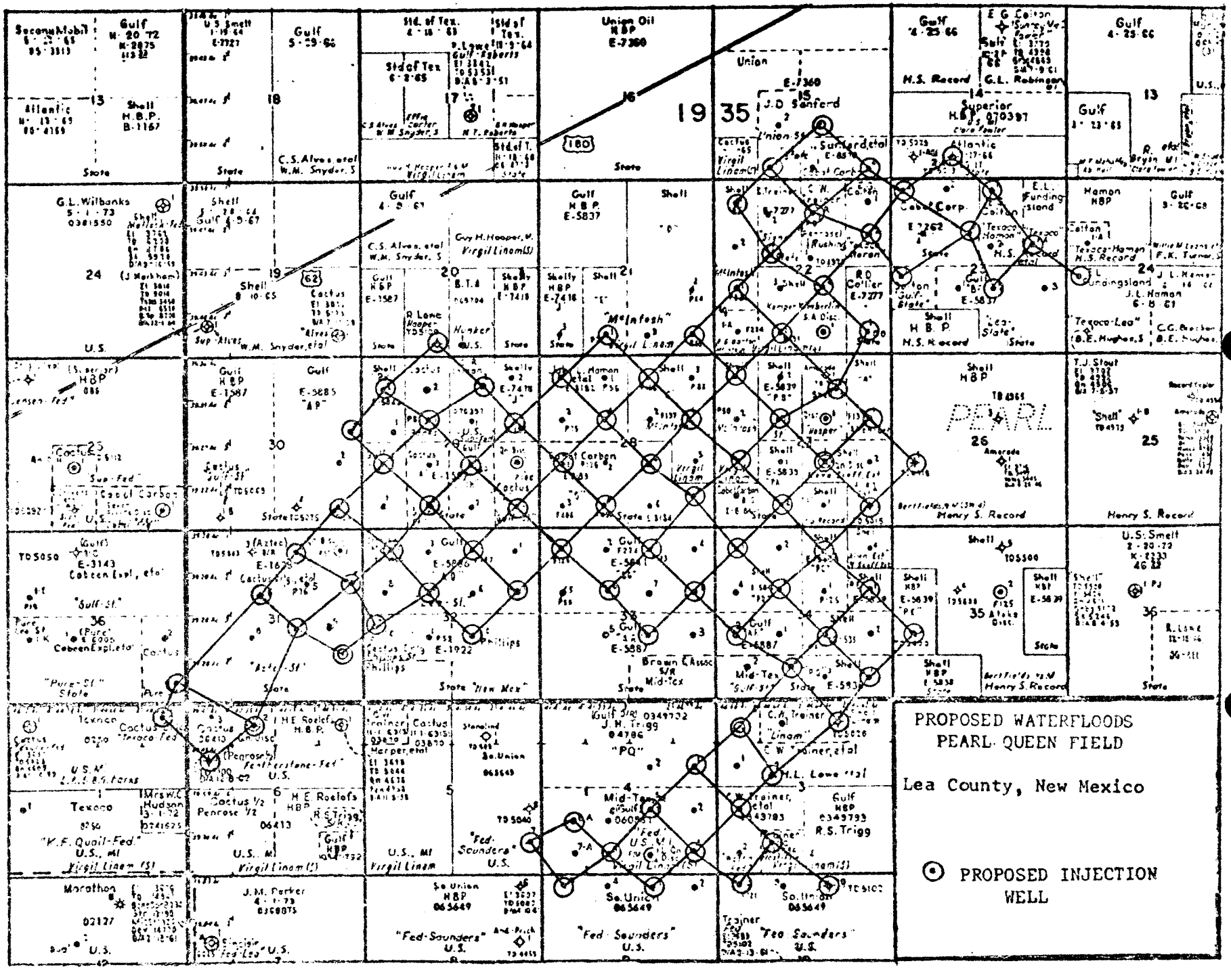
Any person, firm, association, corporation, the State of New Mexico or the United States of America, deeming that the granting of the above application will be truly detrimental to their rights in the waters of said surface and/or underground source, may protest in writing the State Engineer's granting approval of said application. The protest shall set forth all protestant's reasons why the application should not be approved and shall be accompanied by proof that a copy of the protest has been served upon the applicant. Said protest and proof of service must be filed with the State Engineer within ten (10) days after the date of the last publication of this notice. Unless protested, the application will be taken up for consideration by the State Engineer on that date, being on or about the

_____ day of _____ , 19 _____

S. E. Reynolds , State Engineer

NOTE TO PUBLISHER: Fill in date to correspond to date 10 days after date of last (third) publication. Sundays and holidays not included if this date falls on one of them.

cc: State Engineer Jim Wright

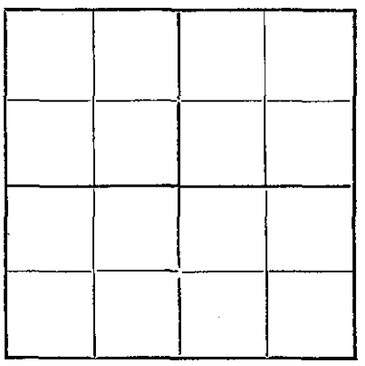


Form WR-23 FIELD ENGINEERING LOG STATE ENGINEER OFFICE ORIGINAL WELL NO. 1 493162

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1



(Plat of 640 acres)

(A) Owner of well C. W. Trainer

Street and Number Box 2222

City Hobbs State New Mexico

Well was drilled under Permit No. and is located in the

SE ¼ SW ¼ NE ¼ of Section 22 Twp. 19S Rge. 35E

(B) Drilling Contractor Ed Burke License No. WD 111

Street and Number Box 306

City Hobbs State New Mexico

Drilling was commenced September 22 19 59

Drilling was completed September 22 19 59

Elevation at top of casing in feet above sea level Total depth of well 45

State whether well is shallow or artesian shallow Depth to water upon completion 18

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1	18	32	14	Gravel
2				
3				
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
6	17	8	0	40	40	open	10	40

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used

Section 5 PLUGGING RECORD

Name of Plugging Contractor License No.

Street and Number City State

Tons of Clay used Tons of Roughage used Type of roughage

Plugging method used Date Plugged 19

Plugging approved by:

Basin Supervisor

Cement Plugs were placed as follows:

No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

FOR USE OF STATE ENGINEER ONLY

Date Received OCT 9 1959 8:48 AM

STATE ENGINEER OFFICE DISTRICT II ROSWELL, N. MEX.

File No. L-4290 Use D.W.D. Location No. 19.35.22. 143

Section 6

LOG OF WELL

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color	Type of Material Encountered
0	2	2		Surface soil
2	15	13		Caliche
15	18	3		Sand Rock
18	32	14		Gravel (water)
32	45	13		Red Clay

L S Elev 3748 ✓
Depth to K Trc 32 ✓
Elev of K Trc 3716

Loc. No. 19.25.22. 14344 ✓
Hydro. Survey Field Check X

SOURCE OF ALTITUDE GIVEN
Interpolated from Topo. Sheet X
Determined by Inst. Leveling
Other

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Edward B Burke
Well Driller

APPENDIX D

Lithologic Sampling Logs

eTECH

	Sample Name: PH01	Date: 01/04/2023
	Site Name: Toro 22-3	
	Incident Number: nOY1727952679	
	Job Number: 18136	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Edyte Konan	Method: PC 210 LC Track Hoe
Site Coordinates: 32.644579, -103.448392	Hole Diameter: N/A	Total Depth: 21 feet (ft)

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. "BGS" - below ground surface

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
							SW/SM	0-20 ft bgs: SAND, dry, tan, well graded with little silt and gravel, fine to coarse, no staining, no odor
Dry	<168	0.3	No	PH01	0.5	0.5		@ 20 ft and 21 ft bgs: some silt, no staining, no odor
Dry	1831.2	0.1	No	PH01	5	5		
Dry	772.8	0.4	No	PH01	10	10		
Dry	1960	0.1	No	PH01	15	15		
Dry	700	0.1	No	PH01	20	20		
Dry	515.2	0.1	No	PH01	21	21		

Total Depth: 21 ft bgs

eTECH

	Sample Name: PH02	Date: 06/30/2023
	Site Name: Toro 22-3	
	Incident Number: nOY1727952679	
	Job Number: 18136	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Edyte Konan	Method: 336E Track Hoe
Site Coordinates: 32.644579, -103.448392	Hole Diameter: N/A	Total Depth: 21 feet (ft)

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. "BGS" - below ground surface

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<168	0.0	No	PH02	0.5	0.5	SW/SM	0-20 ft bgs: SAND, dry, tan, well graded with little silt and gravel, fine to coarse, no staining, no odor
Dry	330.4	0.1	No	-	1	1		@ 20 ft and 21 ft bgs: some silt, no staining, no odor
Dry	-	-	No	-	2	2		
Dry	-	-	No	-	3	3		
Dry	918.4	0.0	No	-	4	4		
Dry	918.4	0.0	No	PH02	10	10		
Dry	772.8	0.0	No	PH02	18	18		
Dry	-	-	No	-	19	19		
Dry	-	-	No	-	20	20		
Dry	470.4	0.0	No	PH02	21	21		

Total Depth: 21 ft bgs

eTECH

	Sample Name: PH03	Date: 06/30/2023
	Site Name: Toro 22-3	
	Incident Number: nOY1727952679	
	Job Number: 18136	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Edyte Konan	Method: 336E Track Hoe
Site Coordinates: 32.644579, -103.448392	Hole Diameter: N/A	Total Depth: 21 feet (ft)

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. "BGS" - below ground surface

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	291.2	0.0	No	PH03	0.5	0.5	SW/SM	0-20 ft bgs: SAND, dry, tan, well graded with little silt and gravel, fine to coarse, no staining, no odor
Dry	151.2	0.0	No	-	1	1		@ 20 ft and 21 ft bgs: some silt, no staining, no odor
Dry	-	-	No	-	2	2		
Dry	-	-	No	-	3	3		
Dry	700	0.0	No	-	4	4		
Dry	1,080.8	0.0	No	PH03	10	10		
Dry	772.8	0.0	No	PH03	18	18		
Dry	-	-	No	-	19	19		
Dry	-	-	No	-	20	20		
Dry	291.2	0.0	No	PH03	21	21		

Total Depth: 21 ft bgs

APPENDIX E

Tables

eTECH

Table 1
SOIL SAMPLE ANALYTICAL RESULTS
WPX Energy Permian, LLC
Toro 22-3
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)			10	50	NE	NE	NE	100	600
Delineation Soil Samples - Incident Number nOY1727952679									
PH01	01/04/2023	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	18.4
PH01	01/04/2023	5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	**1,290**
PH01	01/04/2023	10	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	**731**
PH01	01/04/2023	15	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	**1,940**
PH01	01/04/2023	20	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	**624**
PH01	01/04/2023	21	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	**654**
PH02	06/30/2023	0.5	<0.0250	<0.0500	<20.0	51.9	<100	51.9	77.8
PH02	06/30/2023	10	<0.0250	<0.0500	<20.0	<25.0	<50.0	<50.0	**1,040**
PH02	06/30/2023	18	<0.0250	<0.0500	<20.0	<25.0	<50.0	<50.0	**676**
PH02	06/30/2023	21	<0.0250	<0.0500	<20.0	<25.0	<50.0	<50.0	254
PH03	06/30/2023	0.5	<0.0250	<0.0500	<20.0	161	141	**302**	267
PH03	06/30/2023	10	<0.0250	<0.0500	<20.0	<25.0	<50.0	<50.0	**975**
PH03	06/30/2023	18	<0.0250	<0.0500	<20.0	<25.0	<50.0	<50.0	**802**
PH03	06/30/2023	21	<0.0250	<0.0500	<20.0	<25.0	<50.0	<50.0	287

Notes:
bgs: below ground surface
mg/kg: milligrams per kilogram
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Code
*Concentrations in **bold** exceed the NMOCD Table I Closure Criteria and/or Reclamation Standard for Soils Impacted by a Release*

APPENDIX F

Laboratory Analytical Reports & Chain-of-Custody Documentation

P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

Toro 22-3H
SDG NUMBER 03A1987030

JOB NUMBER

890-3770-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

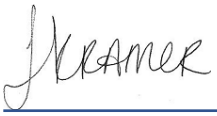
See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Toro 22-3H

Laboratory Job ID: 890-3770-1
SDG: 03A1987030

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-3770-1
Project/Site: Toro 22-3H SDG: 03A1987030

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Job ID: 890-3770-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3770-1

Receipt
The samples were received on 1/5/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3770-1), PH01 (890-3770-2), PH01 (890-3770-3), PH01 (890-3770-4), PH01 (890-3770-5) and PH01 (890-3770-6).

GC VOA
Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-43267 and analytical batch 880-43325 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-43343 and analytical batch 880-43315 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Client Sample ID: PH01

Date Collected: 01/04/23 13:10
Date Received: 01/05/23 10:30
Sample Depth: 0.5'

Lab Sample ID: 890-3770-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 13:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 13:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 13:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/05/23 13:12	01/06/23 13:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 13:22	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/05/23 13:12	01/06/23 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*01/05/23 13:12*	*01/06/23 13:22*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*01/05/23 13:12*	*01/06/23 13:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/06/23 15:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/06/23 16:56	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 14:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 14:02	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*01/06/23 08:58*	*01/06/23 14:02*	*1*
o-Terphenyl	*130*		*70 - 130*	*01/06/23 08:58*	*01/06/23 14:02*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.4**		5.04		mg/Kg			01/06/23 14:42	1

Client Sample ID: PH01

Date Collected: 01/04/23 13:40
Date Received: 01/05/23 10:30
Sample Depth: 5'

Lab Sample ID: 890-3770-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 13:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 13:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 13:43	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/05/23 13:12	01/06/23 13:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 13:43	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/05/23 13:12	01/06/23 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*01/05/23 13:12*	*01/06/23 13:43*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Client Sample ID: PH01

Date Collected: 01/04/23 13:40
Date Received: 01/05/23 10:30
Sample Depth: 5'

Lab Sample ID: 890-3770-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*01/05/23 13:12*	*01/06/23 13:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/06/23 15:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/06/23 16:56	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/06/23 08:58	01/06/23 14:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/06/23 08:58	01/06/23 14:23	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/06/23 08:58	01/06/23 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*01/06/23 08:58*	*01/06/23 14:23*	*1*
o-Terphenyl	*116*		*70 - 130*	*01/06/23 08:58*	*01/06/23 14:23*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1290**		5.00		mg/Kg			01/06/23 14:57	1

Client Sample ID: PH01

Date Collected: 01/04/23 14:10
Date Received: 01/05/23 10:30
Sample Depth: 10'

Lab Sample ID: 890-3770-3
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/05/23 13:12	01/06/23 14:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/05/23 13:12	01/06/23 14:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/05/23 13:12	01/06/23 14:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/05/23 13:12	01/06/23 14:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/05/23 13:12	01/06/23 14:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/05/23 13:12	01/06/23 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*01/05/23 13:12*	*01/06/23 14:03*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*01/05/23 13:12*	*01/06/23 14:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/06/23 15:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/06/23 16:56	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Client Sample ID: PH01

Lab Sample ID: 890-3770-3
Matrix: Solid
Date Collected: 01/04/23 14:10
Date Received: 01/05/23 10:30
Sample Depth: 10'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 14:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 14:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*01/06/23 08:58*	*01/06/23 14:45*	*1*
o-Terphenyl	*118*		*70 - 130*	*01/06/23 08:58*	*01/06/23 14:45*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**731**		5.00		mg/Kg			01/06/23 15:02	1

Client Sample ID: PH01

Lab Sample ID: 890-3770-4
Matrix: Solid
Date Collected: 01/04/23 14:40
Date Received: 01/05/23 10:30
Sample Depth: 15'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 14:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 14:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 14:24	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/05/23 13:12	01/06/23 14:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 14:24	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/05/23 13:12	01/06/23 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*01/05/23 13:12*	*01/06/23 14:24*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*01/05/23 13:12*	*01/06/23 14:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/06/23 15:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			01/06/23 16:56	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		01/06/23 08:58	01/06/23 15:06	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		01/06/23 08:58	01/06/23 15:06	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		01/06/23 08:58	01/06/23 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*01/06/23 08:58*	*01/06/23 15:06*	*1*
o-Terphenyl	*117*		*70 - 130*	*01/06/23 08:58*	*01/06/23 15:06*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Client Sample ID: PH01

Lab Sample ID: 890-3770-4
Matrix: Solid
Date Collected: 01/04/23 14:40
Date Received: 01/05/23 10:30
Sample Depth: 15'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1940		25.2		mg/Kg			01/06/23 15:07	5

Client Sample ID: PH01

Lab Sample ID: 890-3770-5
Matrix: Solid
Date Collected: 01/04/23 15:10
Date Received: 01/05/23 10:30
Sample Depth: 20'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/05/23 13:12	01/06/23 14:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/05/23 13:12	01/06/23 14:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/05/23 13:12	01/06/23 14:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/05/23 13:12	01/06/23 14:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/05/23 13:12	01/06/23 14:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/05/23 13:12	01/06/23 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*01/05/23 13:12*	*01/06/23 14:45*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*01/05/23 13:12*	*01/06/23 14:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/06/23 15:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/06/23 16:56	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 15:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 15:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*01/06/23 08:58*	*01/06/23 15:28*	*1*
o-Terphenyl	*112*		*70 - 130*	*01/06/23 08:58*	*01/06/23 15:28*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	624		5.02		mg/Kg			01/06/23 15:12	1

Client Sample Results

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Client Sample ID: PH01

Date Collected: 01/04/23 15:40
Date Received: 01/05/23 10:30
Sample Depth: 21'

Lab Sample ID: 890-3770-6

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/05/23 13:12	01/06/23 15:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/05/23 13:12	01/06/23 15:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/05/23 13:12	01/06/23 15:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/05/23 13:12	01/06/23 15:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/05/23 13:12	01/06/23 15:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/05/23 13:12	01/06/23 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*01/05/23 13:12*	*01/06/23 15:05*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*01/05/23 13:12*	*01/06/23 15:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			01/06/23 15:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/06/23 16:56	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 16:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 16:11	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/06/23 08:58	01/06/23 16:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*01/06/23 08:58*	*01/06/23 16:11*	*1*
o-Terphenyl	*117*		*70 - 130*	*01/06/23 08:58*	*01/06/23 16:11*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**654**		4.98		mg/Kg			01/06/23 15:17	1

Surrogate Summary

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-23201-A-1-H MS	Matrix Spike	102	96
880-23201-A-1-I MSD	Matrix Spike Duplicate	99	92
890-3770-1	PH01	118	96
890-3770-2	PH01	112	95
890-3770-3	PH01	118	99
890-3770-4	PH01	120	102
890-3770-5	PH01	124	101
890-3770-6	PH01	126	97
LCS 880-43267/1-A	Lab Control Sample	95	95
LCSD 880-43267/2-A	Lab Control Sample Dup	97	96
MB 880-43267/5-A	Method Blank	102	87

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3758-A-101-D MS	Matrix Spike	101	96
890-3758-A-101-E MSD	Matrix Spike Duplicate	102	98
890-3770-1	PH01	126	130
890-3770-2	PH01	105	116
890-3770-3	PH01	106	118
890-3770-4	PH01	105	117
890-3770-5	PH01	101	112
890-3770-6	PH01	103	117
LCS 880-43343/2-A	Lab Control Sample	128	117
LCSD 880-43343/3-A	Lab Control Sample Dup	125	123
MB 880-43343/1-A	Method Blank	150 S1+	137 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43267/5-A
Matrix: Solid
Analysis Batch: 43325

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 10:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 10:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 10:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/05/23 13:12	01/06/23 10:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/05/23 13:12	01/06/23 10:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/05/23 13:12	01/06/23 10:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/05/23 13:12*	*01/06/23 10:51*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*01/05/23 13:12*	*01/06/23 10:51*	*1*

Lab Sample ID: LCS 880-43267/1-A
Matrix: Solid
Analysis Batch: 43325

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43267

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1011		mg/Kg		101	70 - 130		
Toluene			0.100	0.09684		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.08911		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1927		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09524		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-43267/2-A
Matrix: Solid
Analysis Batch: 43325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43267

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1062		mg/Kg		106	70 - 130	5	35
Toluene			0.100	0.1022		mg/Kg		102	70 - 130	5	35
Ethylbenzene			0.100	0.09183		mg/Kg		92	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1960		mg/Kg		98	70 - 130	2	35
o-Xylene			0.100	0.09738		mg/Kg		97	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-23201-A-1-H MS
Matrix: Solid
Analysis Batch: 43325

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43267

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.08556		mg/Kg		85	70 - 130		
Toluene	<0.00199	U	0.0998	0.07942		mg/Kg		80	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-23201-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43325 — **Prep Batch: 43267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.0998	0.06868	F1	mg/Kg		69	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1508		mg/Kg		76	70 - 130
o-Xylene	<0.00199	U	0.0998	0.07521		mg/Kg		75	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-23201-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43325 — **Prep Batch: 43267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.09575		mg/Kg		95	70 - 130	11	35
Toluene	<0.00199	U	0.100	0.08902		mg/Kg		89	70 - 130	11	35
Ethylbenzene	<0.00199	U F1	0.100	0.07687		mg/Kg		77	70 - 130	11	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1675		mg/Kg		84	70 - 130	10	35
o-Xylene	<0.00199	U	0.100	0.08216		mg/Kg		81	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-43343/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43315 — **Prep Batch: 43343**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/06/23 08:18	01/06/23 08:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/06/23 08:18	01/06/23 08:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/06/23 08:18	01/06/23 08:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*150*	*S1+*	*70 - 130*	*01/06/23 08:18*	*01/06/23 08:29*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*01/06/23 08:18*	*01/06/23 08:29*	*1*

Lab Sample ID: LCS 880-43343/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43315 — **Prep Batch: 43343**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1055		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1009		mg/Kg		101	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-43343/2-A
Matrix: Solid
Analysis Batch: 43315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43343

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	128		70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: LCSD 880-43343/3-A
Matrix: Solid
Analysis Batch: 43315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43343

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	994.1		mg/Kg		99	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	1020		mg/Kg		102	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	125		70 - 130
o-Terphenyl	123		70 - 130

Lab Sample ID: 890-3758-A-101-D MS
Matrix: Solid
Analysis Batch: 43315

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43343

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1138		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	90.7		998	1021		mg/Kg		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: 890-3758-A-101-E MSD
Matrix: Solid
Analysis Batch: 43315

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43343

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	980.3		mg/Kg		96	70 - 130	15	20
Diesel Range Organics (Over C10-C28)	90.7		997	1038		mg/Kg		95	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	98		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43379/1-A
Matrix: Solid
Analysis Batch: 43414

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/06/23 13:58	1

Lab Sample ID: LCS 880-43379/2-A
Matrix: Solid
Analysis Batch: 43414

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	244.0		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-43379/3-A
Matrix: Solid
Analysis Batch: 43414

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	245.1		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-3769-A-1-E MS
Matrix: Solid
Analysis Batch: 43414

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	<5.02	U	251	254.6		mg/Kg		101	90 - 110		

Lab Sample ID: 890-3769-A-1-F MSD
Matrix: Solid
Analysis Batch: 43414

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	<5.02	U	251	256.2		mg/Kg		101	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

GC VOA

Prep Batch: 43267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3770-1	PH01	Total/NA	Solid	5035	
890-3770-2	PH01	Total/NA	Solid	5035	
890-3770-3	PH01	Total/NA	Solid	5035	
890-3770-4	PH01	Total/NA	Solid	5035	
890-3770-5	PH01	Total/NA	Solid	5035	
890-3770-6	PH01	Total/NA	Solid	5035	
MB 880-43267/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43267/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43267/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23201-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-23201-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3770-1	PH01	Total/NA	Solid	8021B	43267
890-3770-2	PH01	Total/NA	Solid	8021B	43267
890-3770-3	PH01	Total/NA	Solid	8021B	43267
890-3770-4	PH01	Total/NA	Solid	8021B	43267
890-3770-5	PH01	Total/NA	Solid	8021B	43267
890-3770-6	PH01	Total/NA	Solid	8021B	43267
MB 880-43267/5-A	Method Blank	Total/NA	Solid	8021B	43267
LCS 880-43267/1-A	Lab Control Sample	Total/NA	Solid	8021B	43267
LCSD 880-43267/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43267
880-23201-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	43267
880-23201-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43267

Analysis Batch: 43425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3770-1	PH01	Total/NA	Solid	Total BTEX	
890-3770-2	PH01	Total/NA	Solid	Total BTEX	
890-3770-3	PH01	Total/NA	Solid	Total BTEX	
890-3770-4	PH01	Total/NA	Solid	Total BTEX	
890-3770-5	PH01	Total/NA	Solid	Total BTEX	
890-3770-6	PH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 43315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3770-1	PH01	Total/NA	Solid	8015B NM	43343
890-3770-2	PH01	Total/NA	Solid	8015B NM	43343
890-3770-3	PH01	Total/NA	Solid	8015B NM	43343
890-3770-4	PH01	Total/NA	Solid	8015B NM	43343
890-3770-5	PH01	Total/NA	Solid	8015B NM	43343
890-3770-6	PH01	Total/NA	Solid	8015B NM	43343
MB 880-43343/1-A	Method Blank	Total/NA	Solid	8015B NM	43343
LCS 880-43343/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43343
LCSD 880-43343/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43343
890-3758-A-101-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43343
890-3758-A-101-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43343

QC Association Summary

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

GC Semi VOA

Prep Batch: 43343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3770-1	PH01	Total/NA	Solid	8015NM Prep	
890-3770-2	PH01	Total/NA	Solid	8015NM Prep	
890-3770-3	PH01	Total/NA	Solid	8015NM Prep	
890-3770-4	PH01	Total/NA	Solid	8015NM Prep	
890-3770-5	PH01	Total/NA	Solid	8015NM Prep	
890-3770-6	PH01	Total/NA	Solid	8015NM Prep	
MB 880-43343/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43343/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43343/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3758-A-101-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3758-A-101-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3770-1	PH01	Total/NA	Solid	8015 NM	
890-3770-2	PH01	Total/NA	Solid	8015 NM	
890-3770-3	PH01	Total/NA	Solid	8015 NM	
890-3770-4	PH01	Total/NA	Solid	8015 NM	
890-3770-5	PH01	Total/NA	Solid	8015 NM	
890-3770-6	PH01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 43379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3770-1	PH01	Soluble	Solid	DI Leach	
890-3770-2	PH01	Soluble	Solid	DI Leach	
890-3770-3	PH01	Soluble	Solid	DI Leach	
890-3770-4	PH01	Soluble	Solid	DI Leach	
890-3770-5	PH01	Soluble	Solid	DI Leach	
890-3770-6	PH01	Soluble	Solid	DI Leach	
MB 880-43379/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43379/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43379/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3769-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3769-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 43414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3770-1	PH01	Soluble	Solid	300.0	43379
890-3770-2	PH01	Soluble	Solid	300.0	43379
890-3770-3	PH01	Soluble	Solid	300.0	43379
890-3770-4	PH01	Soluble	Solid	300.0	43379
890-3770-5	PH01	Soluble	Solid	300.0	43379
890-3770-6	PH01	Soluble	Solid	300.0	43379
MB 880-43379/1-A	Method Blank	Soluble	Solid	300.0	43379
LCS 880-43379/2-A	Lab Control Sample	Soluble	Solid	300.0	43379
LCSD 880-43379/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43379
890-3769-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	43379
890-3769-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43379

Lab Chronicle

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Client Sample ID: PH01
Date Collected: 01/04/23 13:10
Date Received: 01/05/23 10:30

Lab Sample ID: 890-3770-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	43267	01/05/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43325	01/06/23 13:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43425	01/06/23 15:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			43445	01/06/23 16:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43343	01/06/23 08:58	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43315	01/06/23 14:02	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	43379	01/06/23 12:42	KS	EET MID
Soluble	Analysis	300.0		1			43414	01/06/23 14:42	CH	EET MID

Client Sample ID: PH01
Date Collected: 01/04/23 13:40
Date Received: 01/05/23 10:30

Lab Sample ID: 890-3770-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	43267	01/05/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43325	01/06/23 13:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43425	01/06/23 15:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			43445	01/06/23 16:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43343	01/06/23 08:58	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43315	01/06/23 14:23	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43379	01/06/23 12:42	KS	EET MID
Soluble	Analysis	300.0		1			43414	01/06/23 14:57	CH	EET MID

Client Sample ID: PH01
Date Collected: 01/04/23 14:10
Date Received: 01/05/23 10:30

Lab Sample ID: 890-3770-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	43267	01/05/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43325	01/06/23 14:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43425	01/06/23 15:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			43445	01/06/23 16:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43343	01/06/23 08:58	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43315	01/06/23 14:45	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43379	01/06/23 12:42	KS	EET MID
Soluble	Analysis	300.0		1			43414	01/06/23 15:02	CH	EET MID

Client Sample ID: PH01
Date Collected: 01/04/23 14:40
Date Received: 01/05/23 10:30

Lab Sample ID: 890-3770-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	43267	01/05/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43325	01/06/23 14:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43425	01/06/23 15:30	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Client Sample ID: PH01

Date Collected: 01/04/23 14:40
Date Received: 01/05/23 10:30

Lab Sample ID: 890-3770-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			43445	01/06/23 16:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	43343	01/06/23 08:58	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43315	01/06/23 15:06	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43379	01/06/23 12:42	KS	EET MID
Soluble	Analysis	300.0		5			43414	01/06/23 15:07	CH	EET MID

Client Sample ID: PH01

Date Collected: 01/04/23 15:10
Date Received: 01/05/23 10:30

Lab Sample ID: 890-3770-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	43267	01/05/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43325	01/06/23 14:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43425	01/06/23 15:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			43445	01/06/23 16:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43343	01/06/23 08:58	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43315	01/06/23 15:28	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	43379	01/06/23 12:42	KS	EET MID
Soluble	Analysis	300.0		1			43414	01/06/23 15:12	CH	EET MID

Client Sample ID: PH01

Date Collected: 01/04/23 15:40
Date Received: 01/05/23 10:30

Lab Sample ID: 890-3770-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	43267	01/05/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43325	01/06/23 15:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43425	01/06/23 15:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			43445	01/06/23 16:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43343	01/06/23 08:58	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43315	01/06/23 16:11	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	43379	01/06/23 12:42	KS	EET MID
Soluble	Analysis	300.0		1			43414	01/06/23 15:17	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: Toro 22-3H

Job ID: 890-3770-1
SDG: 03A1987030

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3770-1	PH01	Solid	01/04/23 13:10	01/05/23 10:30	0.5'
890-3770-2	PH01	Solid	01/04/23 13:40	01/05/23 10:30	5'
890-3770-3	PH01	Solid	01/04/23 14:10	01/05/23 10:30	10'
890-3770-4	PH01	Solid	01/04/23 14:40	01/05/23 10:30	15'
890-3770-5	PH01	Solid	01/04/23 15:10	01/05/23 10:30	20'
890-3770-6	PH01	Solid	01/04/23 15:40	01/05/23 10:30	21'

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

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Project Manager:	Gilbert Moreno	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX Energy
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	832-541-7719	Email:	gmoreno@Ensolum.com, jim.raley@dvn.com

Work Order Comments

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

Project Name:	Toro 22-3H	Turn Around	
Project Number:	03A1987030	☐ Routine ☑ Rush	
Project Location:	Rural Lea, NM	Due Date:	24Hr TAT
Sampler's Name:	Yocoly Edyte Konan	TAT starts the day received by the lab, if received by 4:30pm	
CC #:	1061141201		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.2	
Total Containers:		Corrected Temperature:	5.0	

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
PH01	S	1/4/2023	13:10	0.5'	Grab/	1		X	X	X	
PH01	S	1/4/2023	13:40	5'	Grab/	1		X	X	X	
PH01	S	1/4/2023	14:10	10'	Grab/	1		X	X	X	Incident ID
PH01	S	1/4/2023	14:40	15'	Grab/	1		X	X	X	nOY1727952679
PH01	S	1/4/2023	15:10	20'	Grab/	1		X	X	X	
PH01	S	1/4/2023	15:40	21'	Grab/	1		X	X	X	

ANALYSIS REQUEST

890-3770 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Edyte Konan		1-5-23 1030			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3770-1
SDG Number: 03A1987030

Login Number: 3770
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3770-1
SDG Number: 03A1987030

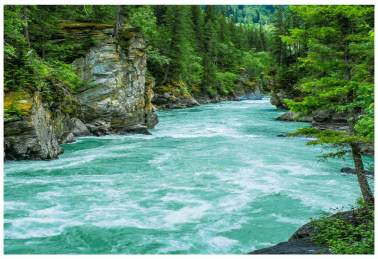
Login Number: 3770
List Number: 2
Creator: Rodriguez, Leticia

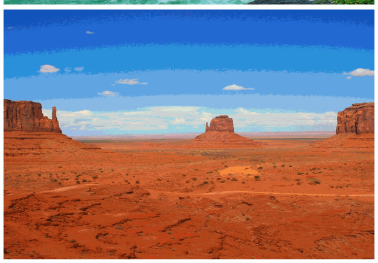
List Source: Eurofins Midland
List Creation: 01/06/23 11:27 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Report to:

Anna Byers





5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com

NELAP ACCREDITED TNI LABORATORY

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Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: Toro 22-3H

Work Order: E307001

Job Number: 01058-0007

Received: 7/5/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/10/23

Date Reported: 7/10/23

Anna Byers
5315 Buena Vista Dr
Carlsbad, NM 88220

Project Name: Toro 22-3H
Workorder: E307001
Date Received: 7/5/2023 8:15:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/5/2023 8:15:00AM, under the Project Name: Toro 22-3H.

The analytical test results summarized in this report with the Project Name: Toro 22-3H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

Alexa Michaels
Sample Custody Officer
Office: 505-632-1881
labadmin@envirotech-inc.com

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ljarboe@envirotech-inc.com

West Texas Midland/Odessa Area
Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	07/10/23 14:57

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
PH02 0.5'	E307001-01A	Soil	06/30/23	07/05/23	Glass Jar, 2 oz.
PH02 10'	E307001-02A	Soil	06/30/23	07/05/23	Glass Jar, 2 oz.
PH02 18'	E307001-03A	Soil	06/30/23	07/05/23	Glass Jar, 2 oz.

Sample Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:57:54PM

PH02 0.5'

E307001-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Benzene	ND	0.0250	1	07/05/23	07/06/23	
Ethylbenzene	ND	0.0250	1	07/05/23	07/06/23	
Toluene	ND	0.0250	1	07/05/23	07/06/23	
o-Xylene	ND	0.0250	1	07/05/23	07/06/23	
p,m-Xylene	ND	0.0500	1	07/05/23	07/06/23	
Total Xylenes	ND	0.0250	1	07/05/23	07/06/23	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/05/23	07/06/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.5 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2327033
Diesel Range Organics (C10-C28)	**51.9**	50.0	2	07/06/23	07/07/23	
Oil Range Organics (C28-C36)	ND	100	2	07/06/23	07/07/23	
Surrogate: n-Nonane		*89.2 %*	*50-200*	*07/06/23*	*07/07/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA			Batch: 2327028
Chloride	**77.8**	20.0	1	07/06/23	07/07/23	

Sample Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:57:54PM

PH02 10'

E307001-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Benzene	ND	0.0250	1	07/05/23	07/06/23	
Ethylbenzene	ND	0.0250	1	07/05/23	07/06/23	
Toluene	ND	0.0250	1	07/05/23	07/06/23	
o-Xylene	ND	0.0250	1	07/05/23	07/06/23	
p,m-Xylene	ND	0.0500	1	07/05/23	07/06/23	
Total Xylenes	ND	0.0250	1	07/05/23	07/06/23	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/05/23	07/06/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.9 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2327033
Diesel Range Organics (C10-C28)	ND	25.0	1	07/06/23	07/08/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/06/23	07/08/23	
Surrogate: n-Nonane		*86.9 %*	*50-200*	*07/06/23*	*07/08/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA			Batch: 2327028
Chloride	**1040**	20.0	1	07/06/23	07/07/23	

Sample Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:57:54PM

PH02 18'

E307001-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Benzene	ND	0.0250	1	07/05/23	07/06/23	
Ethylbenzene	ND	0.0250	1	07/05/23	07/06/23	
Toluene	ND	0.0250	1	07/05/23	07/06/23	
o-Xylene	ND	0.0250	1	07/05/23	07/06/23	
p,m-Xylene	ND	0.0500	1	07/05/23	07/06/23	
Total Xylenes	ND	0.0250	1	07/05/23	07/06/23	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/05/23	07/06/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.4 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2327033
Diesel Range Organics (C10-C28)	ND	25.0	1	07/06/23	07/08/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/06/23	07/08/23	
Surrogate: n-Nonane		*85.1 %*	*50-200*	*07/06/23*	*07/08/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA			Batch: 2327028
Chloride	**676**	20.0	1	07/06/23	07/07/23	

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:57:54PM

Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327003-BLK1)									Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*8.37*		*8.00*		*105*	*70-130*			
LCS (2327003-BS1)									Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.90	0.0250	5.00		97.9	70-130			
Ethylbenzene	4.75	0.0250	5.00		95.0	70-130			
Toluene	4.91	0.0250	5.00		98.2	70-130			
o-Xylene	4.89	0.0250	5.00		97.8	70-130			
p,m-Xylene	9.84	0.0500	10.0		98.4	70-130			
Total Xylenes	14.7	0.0250	15.0		98.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.21*		*8.00*		*103*	*70-130*			
Matrix Spike (2327003-MS1)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.76	0.0250	5.00	ND	95.3	54-133			
Ethylbenzene	4.64	0.0250	5.00	0.0264	92.3	61-133			
Toluene	4.84	0.0250	5.00	0.0757	95.3	61-130			
o-Xylene	4.80	0.0250	5.00	ND	96.0	63-131			
p,m-Xylene	9.64	0.0500	10.0	0.0702	95.7	63-131			
Total Xylenes	14.4	0.0250	15.0	0.0702	95.8	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.15*		*8.00*		*102*	*70-130*			
Matrix Spike Dup (2327003-MSD1)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.93	0.0250	5.00	ND	98.5	54-133	3.38	20	
Ethylbenzene	4.79	0.0250	5.00	0.0264	95.4	61-133	3.20	20	
Toluene	5.00	0.0250	5.00	0.0757	98.4	61-130	3.11	20	
o-Xylene	4.96	0.0250	5.00	ND	99.1	63-131	3.22	20	
p,m-Xylene	9.95	0.0500	10.0	0.0702	98.8	63-131	3.19	20	
Total Xylenes	14.9	0.0250	15.0	0.0702	98.9	63-131	3.20	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.08*		*8.00*		*101*	*70-130*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:57:54PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327003-BLK1)									Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.69*		*8.00*		*83.6*	*70-130*			
LCS (2327003-BS2)									Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	48.4	20.0	50.0		96.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.20*		*8.00*		*90.0*	*70-130*			
Matrix Spike (2327003-MS2)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	48.7	20.0	50.0	ND	97.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.02*		*8.00*		*87.7*	*70-130*			
Matrix Spike Dup (2327003-MSD2)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	47.4	20.0	50.0	ND	94.9	70-130	2.62	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.02*		*8.00*		*87.8*	*70-130*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:57:54PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327033-BLK1)									Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*46.0*		*50.0*		*91.9*	*50-200*			
LCS (2327033-BS1)									Prepared: 07/06/23 Analyzed: 07/10/23
Diesel Range Organics (C10-C28)	239	25.0	250		95.6	38-132			
Surrogate: n-Nonane	*45.4*		*50.0*		*90.8*	*50-200*			
Matrix Spike (2327033-MS1)				**Source: E306236-04**					Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	366	25.0	250	93.6	109	38-132			
Surrogate: n-Nonane	*41.0*		*50.0*		*81.9*	*50-200*			
Matrix Spike Dup (2327033-MSD1)				**Source: E306236-04**					Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	383	25.0	250	93.6	116	38-132	4.62	20	
Surrogate: n-Nonane	*42.0*		*50.0*		*84.1*	*50-200*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:57:54PM

Anions by EPA 300.0/9056A

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327028-BLK1)									Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	ND	20.0							
LCS (2327028-BS1)									Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	253	20.0	250		101	90-110			
Matrix Spike (2327028-MS1)				**Source: E306247-01**					Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	277	20.0	250	28.9	99.3	80-120			
Matrix Spike Dup (2327028-MSD1)				**Source: E306247-01**					Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	277	20.0	250	28.9	99.3	80-120	0.00794	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Definitions and Notes

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	07/10/23 14:57

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Client: WPX Energy Permian LLC.	**Bill To**
Project: Toro 22-3H	Attention: Jim Raley
Project Manager: Anna Buyer	Address: 5315 Buena Vista Dr.
Address: 13000 W County Rd 100	City, State, Zip: Carlsbad, NM, 88220
City, State, Zip_Odessa,TX, 79765	Phone: 575-885-7502
Phone: (575) 200-6754	Email: jim.raley@dvn.com
Email: Devon-team@etechenv.com	WO: EE.151032.01.ABD
Collected by: Edyte Konan	Incident ID: nOY1727952679

Lab Use Only: Lab WO#	Lab Use Only: Job Number	TAT: 1D	2D	3D	Standard	EPA Program: CWA	SDWA
E307001	01058-0007				5 day TAT		
							RCRA

State: NM | CO | UT | AZ | TX

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM		GDOC TX		Remarks
8:00	6/30/2023	S	1	PH02	1	0.5'								X				
8:10	6/30/2023	S	1	PH02	2	10'								X				
8:20	6/30/2023	S	1	PH02	3	18'								X				

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by:

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Edyte Konan	06/30/2023	14:20	Michelle R Gonzales	6-30-23	1420
Michelle R Gonzales	6-30-23	1615	Caitlin Mars	7/5/23	8:15

Lab Use Only
Received on ice: (Y) / N
T1 ______ T2 ______ T3 ______
AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other ________

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made.. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory

Printed: 7/5/2023 9:04:50AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	WPX Energy - Carlsbad	Date Received:	07/05/23 08:15	Work Order ID:	E307001
Phone:	(575) 200-6754	Date Logged In:	07/05/23 09:01	Logged In By:	Caitlin Mars
Email:	anna@etechenv.vom	Due Date:	07/11/23 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes	
2. Does the number of samples per sampling site location match the COC	Yes	
3. Were samples dropped off by client or carrier?	Yes	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Comments/Resolution

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT?	Yes

Sample Cooler

7. Was a sample cooler received?	Yes
8. If yes, was cooler received in good condition?	Yes
9. Was the sample(s) received intact, i.e., not broken?	Yes
10. Were custody/security seals present?	No
11. If yes, were custody/security seals intact?	NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling	Yes
13. If no visible ice, record the temperature. Actual sample temperature: 4°C	

Sample Container

14. Are aqueous VOC samples present?	No
15. Are VOC samples collected in VOA Vials?	NA
16. Is the head space less than 6-8 mm (pea sized or less)?	NA
17. Was a trip blank (TB) included for VOC analyses?	NA
18. Are non-VOC samples collected in the correct containers?	Yes
19. Is the appropriate volume/weight or number of sample containers collected?	Yes

Field Label

20. Were field sample labels filled out with the minimum information:	
Sample ID?	Yes
Date/Time Collected?	Yes
Collectors name?	Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved?	No
22. Are sample(s) correctly preserved?	NA
24. Is lab filteration required and/or requested for dissolved metals?	No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase?	No
27. If yes, does the COC specify which phase(s) is to be analyzed?	NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory?	No	
29. Was a subcontract laboratory specified by the client and if so who?	NA	Subcontract Lab: NA

Client Instruction

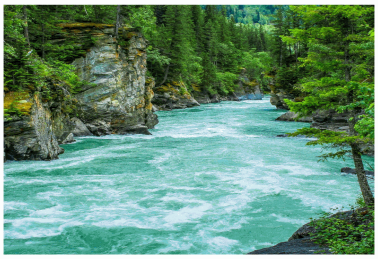
Signature of client authorizing changes to the COC or sample disposition.

Date

envirotech Inc.

Report to:

Anna Byers



5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com

NELAP ACCREDITED TNI LABORATORY

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: Toro 22-3H

Work Order: E307003

Job Number: 01058-0007

Received: 7/5/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/10/23

Date Reported: 7/10/23

Anna Byers
5315 Buena Vista Dr
Carlsbad, NM 88220

Project Name: Toro 22-3H
Workorder: E307003
Date Received: 7/5/2023 8:15:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/5/2023 8:15:00AM, under the Project Name: Toro 22-3H.

The analytical test results summarized in this report with the Project Name: Toro 22-3H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

Alexa Michaels
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Office: 505-632-1881
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ljarboe@envirotech-inc.com

West Texas Midland/Odessa Area
Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	07/10/23 15:01

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
PH02 21'	E307003-01A	Soil	06/30/23	07/05/23	Glass Jar, 2 oz.

Sample Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:01:38PM

PH02 21'

E307003-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Benzene	ND	0.0250	1	07/05/23	07/06/23	
Ethylbenzene	ND	0.0250	1	07/05/23	07/06/23	
Toluene	ND	0.0250	1	07/05/23	07/06/23	
o-Xylene	ND	0.0250	1	07/05/23	07/06/23	
p,m-Xylene	ND	0.0500	1	07/05/23	07/06/23	
Total Xylenes	ND	0.0250	1	07/05/23	07/06/23	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/05/23	07/06/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.2 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2327033
Diesel Range Organics (C10-C28)	ND	25.0	1	07/06/23	07/08/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/06/23	07/08/23	
Surrogate: n-Nonane		*87.3 %*	*50-200*	*07/06/23*	*07/08/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA			Batch: 2327028
Chloride	**254**	20.0	1	07/06/23	07/07/23	

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:01:38PM

Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327003-BLK1)									Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*8.37*		*8.00*		*105*	*70-130*			
LCS (2327003-BS1)									Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.90	0.0250	5.00		97.9	70-130			
Ethylbenzene	4.75	0.0250	5.00		95.0	70-130			
Toluene	4.91	0.0250	5.00		98.2	70-130			
o-Xylene	4.89	0.0250	5.00		97.8	70-130			
p,m-Xylene	9.84	0.0500	10.0		98.4	70-130			
Total Xylenes	14.7	0.0250	15.0		98.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.21*		*8.00*		*103*	*70-130*			
Matrix Spike (2327003-MS1)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.76	0.0250	5.00	ND	95.3	54-133			
Ethylbenzene	4.64	0.0250	5.00	0.0264	92.3	61-133			
Toluene	4.84	0.0250	5.00	0.0757	95.3	61-130			
o-Xylene	4.80	0.0250	5.00	ND	96.0	63-131			
p,m-Xylene	9.64	0.0500	10.0	0.0702	95.7	63-131			
Total Xylenes	14.4	0.0250	15.0	0.0702	95.8	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.15*		*8.00*		*102*	*70-130*			
Matrix Spike Dup (2327003-MSD1)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.93	0.0250	5.00	ND	98.5	54-133	3.38	20	
Ethylbenzene	4.79	0.0250	5.00	0.0264	95.4	61-133	3.20	20	
Toluene	5.00	0.0250	5.00	0.0757	98.4	61-130	3.11	20	
o-Xylene	4.96	0.0250	5.00	ND	99.1	63-131	3.22	20	
p,m-Xylene	9.95	0.0500	10.0	0.0702	98.8	63-131	3.19	20	
Total Xylenes	14.9	0.0250	15.0	0.0702	98.9	63-131	3.20	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.08*		*8.00*		*101*	*70-130*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:01:38PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327003-BLK1)									Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.69*		*8.00*		*83.6*	*70-130*			
LCS (2327003-BS2)									Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	48.4	20.0	50.0		96.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.20*		*8.00*		*90.0*	*70-130*			
Matrix Spike (2327003-MS2)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	48.7	20.0	50.0	ND	97.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.02*		*8.00*		*87.7*	*70-130*			
Matrix Spike Dup (2327003-MSD2)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	47.4	20.0	50.0	ND	94.9	70-130	2.62	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.02*		*8.00*		*87.8*	*70-130*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:01:38PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327033-BLK1)									Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*46.0*		*50.0*		*91.9*	*50-200*			
LCS (2327033-BS1)									Prepared: 07/06/23 Analyzed: 07/10/23
Diesel Range Organics (C10-C28)	239	25.0	250		95.6	38-132			
Surrogate: n-Nonane	*45.4*		*50.0*		*90.8*	*50-200*			
Matrix Spike (2327033-MS1)				**Source: E306236-04**					Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	366	25.0	250	93.6	109	38-132			
Surrogate: n-Nonane	*41.0*		*50.0*		*81.9*	*50-200*			
Matrix Spike Dup (2327033-MSD1)				**Source: E306236-04**					Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	383	25.0	250	93.6	116	38-132	4.62	20	
Surrogate: n-Nonane	*42.0*		*50.0*		*84.1*	*50-200*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:01:38PM

Anions by EPA 300.0/9056A

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327028-BLK1)									Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	ND	20.0							
LCS (2327028-BS1)									Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	253	20.0	250		101	90-110			
Matrix Spike (2327028-MS1)				**Source: E306247-01**					Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	277	20.0	250	28.9	99.3	80-120			
Matrix Spike Dup (2327028-MSD1)				**Source: E306247-01**					Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	277	20.0	250	28.9	99.3	80-120	0.00794	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Definitions and Notes

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	07/10/23 15:01

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Project Information

Chain of Custody

Client / Project	Bill To	Lab Use Only		TAT				EPA Program	
Client: WPX Energy Permian LLC.	Attention: Jim Raley	Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA
Project: Toro 22-3H	Address: 5315 Buena Vista Dr.	E307003	01058-0007				5 day TAT		
Project Manager: Anna Buyer	City, State, Zip: Carlsbad, NM, 88220	Analysis and Method							RCRA
Address: 13000 W County Rd 100	Phone: 575-885-7502								
City, State, Zip_Odessa,TX, 79765	Email: jim.raley@dvn.com								
Phone: (575) 200-6754	WO: EE.151032.01.ABD								
Email: Devon-team@etechenv.com	Incident ID: nOY1727952679								
Collected by: Edyte Konan									

State: NM | CO | UT | AZ | TX

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM		GDOC TX		Remarks
8:30	6/30/2023	S	1	PH02	1	21'								X				

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by:

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Edyte Konan	06/30/2023	14:20	Michelle R Gonzales	6-30-23	1420
Michelle R Gonzales	6-30-23	1615	[signature]	7/5/23	8:15

Lab Use Only
Received on ice: (Y) / N
T1 ____ T2 ____ T3 ____
AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other ________

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory

Printed: 7/5/2023 10:51:42AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	WPX Energy - Carlsbad	Date Received:	07/05/23 08:15	Work Order ID:	E307003
Phone:	(575) 200-6754	Date Logged In:	07/05/23 09:13	Logged In By:	Caitlin Mars
Email:	anna@etechenv.vom	Due Date:	07/11/23 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes	
2. Does the number of samples per sampling site location match the COC	Yes	
3. Were samples dropped off by client or carrier?	Yes	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Comments/Resolution

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT?	Yes	

Sample Cooler

7. Was a sample cooler received?	Yes	
8. If yes, was cooler received in good condition?	Yes	
9. Was the sample(s) received intact, i.e., not broken?	Yes	
10. Were custody/security seals present?	No	
11. If yes, were custody/security seals intact?	NA	
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling	Yes	
13. If no visible ice, record the temperature. Actual sample temperature: 4°C		

Sample Container

14. Are aqueous VOC samples present?	No	
15. Are VOC samples collected in VOA Vials?	NA	
16. Is the head space less than 6-8 mm (pea sized or less)?	NA	
17. Was a trip blank (TB) included for VOC analyses?	NA	
18. Are non-VOC samples collected in the correct containers?	Yes	
19. Is the appropriate volume/weight or number of sample containers collected?	Yes	

Field Label

20. Were field sample labels filled out with the minimum information:		
Sample ID?	Yes	
Date/Time Collected?	Yes	
Collectors name?	Yes	

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved?	No	
22. Are sample(s) correctly preserved?	NA	
24. Is lab filteration required and/or requested for dissolved metals?	No	

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase?	No	
27. If yes, does the COC specify which phase(s) is to be analyzed?	NA	

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory?	No	
29. Was a subcontract laboratory specified by the client and if so who?	NA	Subcontract Lab: NA

Client Instruction

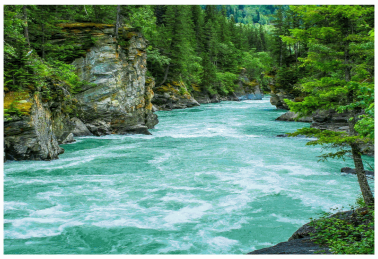
Signature of client authorizing changes to the COC or sample disposition.

Date

envirotech Inc.

Report to:

Anna Byers



5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com

NELAP ACCREDITED TNI LABORATORY

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: Toro 22-3H

Work Order: E307002

Job Number: 01058-0007

Received: 7/5/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/10/23

Date Reported: 7/10/23

Anna Byers
5315 Buena Vista Dr
Carlsbad, NM 88220

Project Name: Toro 22-3H
Workorder: E307002
Date Received: 7/5/2023 8:15:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/5/2023 8:15:00AM, under the Project Name: Toro 22-3H.

The analytical test results summarized in this report with the Project Name: Toro 22-3H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

Alexa Michaels
Sample Custody Officer
Office: 505-632-1881
labadmin@envirotech-inc.com

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Southern New Mexico Area
Lynn Jarboe
Technical Representative/Client Services
Office: 505-421-LABS(5227)
Cell: 505-320-4759
ljarboe@envirotech-inc.com

West Texas Midland/Odessa Area
Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	07/10/23 14:59

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
PH03 0.5'	E307002-01A	Soil	06/30/23	07/05/23	Glass Jar, 2 oz.
PH03 10'	E307002-02A	Soil	06/30/23	07/05/23	Glass Jar, 2 oz.
PH03 18'	E307002-03A	Soil	06/30/23	07/05/23	Glass Jar, 2 oz.

Sample Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:59:30PM

PH03 0.5'

E307002-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Benzene	ND	0.0250	1	07/05/23	07/06/23	
Ethylbenzene	ND	0.0250	1	07/05/23	07/06/23	
Toluene	ND	0.0250	1	07/05/23	07/06/23	
o-Xylene	ND	0.0250	1	07/05/23	07/06/23	
p,m-Xylene	ND	0.0500	1	07/05/23	07/06/23	
Total Xylenes	ND	0.0250	1	07/05/23	07/06/23	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/05/23	07/06/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*86.9 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2327033
Diesel Range Organics (C10-C28)	**161**	50.0	2	07/06/23	07/08/23	
Oil Range Organics (C28-C36)	**141**	100	2	07/06/23	07/08/23	
Surrogate: n-Nonane		*87.0 %*	*50-200*	*07/06/23*	*07/08/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA			Batch: 2327028
Chloride	**267**	20.0	1	07/06/23	07/07/23	

Sample Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:59:30PM

PH03 10'

E307002-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Benzene	ND	0.0250	1	07/05/23	07/06/23	
Ethylbenzene	ND	0.0250	1	07/05/23	07/06/23	
Toluene	ND	0.0250	1	07/05/23	07/06/23	
o-Xylene	ND	0.0250	1	07/05/23	07/06/23	
p,m-Xylene	ND	0.0500	1	07/05/23	07/06/23	
Total Xylenes	ND	0.0250	1	07/05/23	07/06/23	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/05/23	07/06/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.0 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2327033
Diesel Range Organics (C10-C28)	ND	25.0	1	07/06/23	07/08/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/06/23	07/08/23	
Surrogate: n-Nonane		*90.4 %*	*50-200*	*07/06/23*	*07/08/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA			Batch: 2327028
Chloride	**975**	20.0	1	07/06/23	07/07/23	

Sample Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:59:30PM

PH03 18'

E307002-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Benzene	ND	0.0250	1	07/05/23	07/06/23	
Ethylbenzene	ND	0.0250	1	07/05/23	07/06/23	
Toluene	ND	0.0250	1	07/05/23	07/06/23	
o-Xylene	ND	0.0250	1	07/05/23	07/06/23	
p,m-Xylene	ND	0.0500	1	07/05/23	07/06/23	
Total Xylenes	ND	0.0250	1	07/05/23	07/06/23	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/05/23	07/06/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.9 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2327033
Diesel Range Organics (C10-C28)	ND	25.0	1	07/06/23	07/08/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/06/23	07/08/23	
Surrogate: n-Nonane		*81.6 %*	*50-200*	*07/06/23*	*07/08/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA			Batch: 2327028
Chloride	**802**	20.0	1	07/06/23	07/07/23	

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:59:30PM

Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327003-BLK1)									Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*8.37*		*8.00*		*105*	*70-130*			
LCS (2327003-BS1)									Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.90	0.0250	5.00		97.9	70-130			
Ethylbenzene	4.75	0.0250	5.00		95.0	70-130			
Toluene	4.91	0.0250	5.00		98.2	70-130			
o-Xylene	4.89	0.0250	5.00		97.8	70-130			
p,m-Xylene	9.84	0.0500	10.0		98.4	70-130			
Total Xylenes	14.7	0.0250	15.0		98.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.21*		*8.00*		*103*	*70-130*			
Matrix Spike (2327003-MS1)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.76	0.0250	5.00	ND	95.3	54-133			
Ethylbenzene	4.64	0.0250	5.00	0.0264	92.3	61-133			
Toluene	4.84	0.0250	5.00	0.0757	95.3	61-130			
o-Xylene	4.80	0.0250	5.00	ND	96.0	63-131			
p,m-Xylene	9.64	0.0500	10.0	0.0702	95.7	63-131			
Total Xylenes	14.4	0.0250	15.0	0.0702	95.8	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.15*		*8.00*		*102*	*70-130*			
Matrix Spike Dup (2327003-MSD1)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.93	0.0250	5.00	ND	98.5	54-133	3.38	20	
Ethylbenzene	4.79	0.0250	5.00	0.0264	95.4	61-133	3.20	20	
Toluene	5.00	0.0250	5.00	0.0757	98.4	61-130	3.11	20	
o-Xylene	4.96	0.0250	5.00	ND	99.1	63-131	3.22	20	
p,m-Xylene	9.95	0.0500	10.0	0.0702	98.8	63-131	3.19	20	
Total Xylenes	14.9	0.0250	15.0	0.0702	98.9	63-131	3.20	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.08*		*8.00*		*101*	*70-130*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:59:30PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327003-BLK1)									Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.69*		*8.00*		*83.6*	*70-130*			
LCS (2327003-BS2)									Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	48.4	20.0	50.0		96.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.20*		*8.00*		*90.0*	*70-130*			
Matrix Spike (2327003-MS2)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	48.7	20.0	50.0	ND	97.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.02*		*8.00*		*87.7*	*70-130*			
Matrix Spike Dup (2327003-MSD2)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	47.4	20.0	50.0	ND	94.9	70-130	2.62	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.02*		*8.00*		*87.8*	*70-130*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:59:30PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327033-BLK1)									Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*46.0*		*50.0*		*91.9*	*50-200*			
LCS (2327033-BS1)									Prepared: 07/06/23 Analyzed: 07/10/23
Diesel Range Organics (C10-C28)	239	25.0	250		95.6	38-132			
Surrogate: n-Nonane	*45.4*		*50.0*		*90.8*	*50-200*			
Matrix Spike (2327033-MS1)				**Source: E306236-04**					Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	366	25.0	250	93.6	109	38-132			
Surrogate: n-Nonane	*41.0*		*50.0*		*81.9*	*50-200*			
Matrix Spike Dup (2327033-MSD1)				**Source: E306236-04**					Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	383	25.0	250	93.6	116	38-132	4.62	20	
Surrogate: n-Nonane	*42.0*		*50.0*		*84.1*	*50-200*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 2:59:30PM

Anions by EPA 300.0/9056A

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327028-BLK1)									Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	ND	20.0							
LCS (2327028-BS1)									Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	253	20.0	250		101	90-110			
Matrix Spike (2327028-MS1)				**Source: E306247-01**					Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	277	20.0	250	28.9	99.3	80-120			
Matrix Spike Dup (2327028-MSD1)				**Source: E306247-01**					Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	277	20.0	250	28.9	99.3	80-120	0.00794	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Definitions and Notes

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	07/10/23 14:59

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Project Information	Bill To	Lab Use Only	TAT	EPA Program
Client: WPX Energy Permian LLC.	Attention: Jim Raley	Lab WO# E307002 / Job Number 0058-0007	1D / 2D / 3D / Standard: 5 day TAT	CWA / SDWA / RCRA
Project: Toro 22-3H	Address: 5315 Buena Vista Dr.			State: NM / CO / UT / AZ / TX
Project Manager: Anna Buyer	City, State, Zip: Carlsbad, NM, 88220			
Address: 13000 W County Rd 100	Phone: 575-885-7502			
City, State, Zip_Odessa,TX, 79765	Email: jim.raley@dvn.com			
Phone: (575) 200-6754	WO: EE.151032.01.ABD			
Email: Devon-team@etechenv.com	Incident ID: nOY1727952679			
Collected by: Edyte Konan				

Analysis and Method

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM		GDOC TX		Remarks
8:40	6/30/2023	S	1	PH03	1	0.5'								X				
8:50	6/30/2023	S	1	PH03	2	10'								X				
9:00	6/30/2023	S	1	PH03	3	18'								X				

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: ____

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Edyte Konan	06/30/2023	14:20	Michelle R Gonzales	6-30-23	1420
Michelle R Gonzales	6-30-23	1615	Caith Man	7/5/23	8:15

Lab Use Only

Received on ice: (Y) N

T1 ____ T2 ____ T3 ____

AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other ____

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory

Printed: 7/5/2023 10:42:56AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	WPX Energy - Carlsbad	Date Received:	07/05/23 08:15	Work Order ID:	E307002
Phone:	(575) 200-6754	Date Logged In:	07/05/23 09:08	Logged In By:	Caitlin Mars
Email:	anna@etechenv.vom	Due Date:	07/11/23 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes	
2. Does the number of samples per sampling site location match the COC	Yes	
3. Were samples dropped off by client or carrier?	Yes	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Comments/Resolution

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT?	Yes	

Sample Cooler

7. Was a sample cooler received?	Yes	
8. If yes, was cooler received in good condition?	Yes	
9. Was the sample(s) received intact, i.e., not broken?	Yes	
10. Were custody/security seals present?	No	
11. If yes, were custody/security seals intact?	NA	
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling	Yes	
13. If no visible ice, record the temperature. Actual sample temperature: 4°C		

Sample Container

14. Are aqueous VOC samples present?	No	
15. Are VOC samples collected in VOA Vials?	NA	
16. Is the head space less than 6-8 mm (pea sized or less)?	NA	
17. Was a trip blank (TB) included for VOC analyses?	NA	
18. Are non-VOC samples collected in the correct containers?	Yes	
19. Is the appropriate volume/weight or number of sample containers collected?	Yes	

Field Label

20. Were field sample labels filled out with the minimum information:		
Sample ID?	Yes	
Date/Time Collected?	Yes	
Collectors name?	Yes	

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved?	No	
22. Are sample(s) correctly preserved?	NA	
24. Is lab filteration required and/or requested for dissolved metals?	No	

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase?	No	
27. If yes, does the COC specify which phase(s) is to be analyzed?	NA	

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory?	No	
29. Was a subcontract laboratory specified by the client and if so who?	NA	Subcontract Lab: NA

Client Instruction

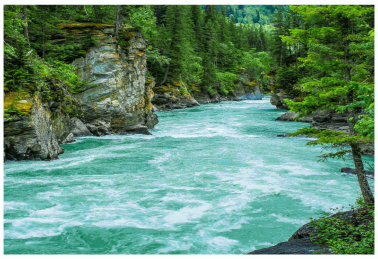
Signature of client authorizing changes to the COC or sample disposition.

Date

envirotech Inc.

Report to:

Anna Byers



5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com

NELAP ACCREDITED TNI LABORATORY

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Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: Toro 22-3H

Work Order: E307004

Job Number: 01058-0007

Received: 7/5/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/10/23

Date Reported: 7/10/23

Anna Byers
5315 Buena Vista Dr
Carlsbad, NM 88220

Project Name: Toro 22-3H
Workorder: E307004
Date Received: 7/5/2023 8:15:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/5/2023 8:15:00AM, under the Project Name: Toro 22-3H.

The analytical test results summarized in this report with the Project Name: Toro 22-3H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

Alexa Michaels
Sample Custody Officer
Office: 505-632-1881
labadmin@envirotech-inc.com

Field Offices:

Southern New Mexico Area
Lynn Jarboe
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Office: 505-421-LABS(5227)
Cell: 505-320-4759
ljarboe@envirotech-inc.com

West Texas Midland/Odessa Area
Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	07/10/23 15:03

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
PH03 21'	E307004-01A	Soil	06/30/23	07/05/23	Glass Jar, 2 oz.

Sample Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:03:33PM

PH03 21'

E307004-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Benzene	ND	0.0250	1	07/05/23	07/06/23	
Ethylbenzene	ND	0.0250	1	07/05/23	07/06/23	
Toluene	ND	0.0250	1	07/05/23	07/06/23	
o-Xylene	ND	0.0250	1	07/05/23	07/06/23	
p,m-Xylene	ND	0.0500	1	07/05/23	07/06/23	
Total Xylenes	ND	0.0250	1	07/05/23	07/06/23	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2327003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/05/23	07/06/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*88.0 %*	*70-130*	*07/05/23*	*07/06/23*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2327033
Diesel Range Organics (C10-C28)	ND	25.0	1	07/06/23	07/08/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/06/23	07/08/23	
Surrogate: n-Nonane		*89.9 %*	*50-200*	*07/06/23*	*07/08/23*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA			Batch: 2327028
Chloride	**287**	20.0	1	07/06/23	07/07/23	

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:03:33PM

Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327003-BLK1)									Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*8.37*		*8.00*		*105*	*70-130*			
LCS (2327003-BS1)									Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.90	0.0250	5.00		97.9	70-130			
Ethylbenzene	4.75	0.0250	5.00		95.0	70-130			
Toluene	4.91	0.0250	5.00		98.2	70-130			
o-Xylene	4.89	0.0250	5.00		97.8	70-130			
p,m-Xylene	9.84	0.0500	10.0		98.4	70-130			
Total Xylenes	14.7	0.0250	15.0		98.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.21*		*8.00*		*103*	*70-130*			
Matrix Spike (2327003-MS1)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.76	0.0250	5.00	ND	95.3	54-133			
Ethylbenzene	4.64	0.0250	5.00	0.0264	92.3	61-133			
Toluene	4.84	0.0250	5.00	0.0757	95.3	61-130			
o-Xylene	4.80	0.0250	5.00	ND	96.0	63-131			
p,m-Xylene	9.64	0.0500	10.0	0.0702	95.7	63-131			
Total Xylenes	14.4	0.0250	15.0	0.0702	95.8	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.15*		*8.00*		*102*	*70-130*			
Matrix Spike Dup (2327003-MSD1)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Benzene	4.93	0.0250	5.00	ND	98.5	54-133	3.38	20	
Ethylbenzene	4.79	0.0250	5.00	0.0264	95.4	61-133	3.20	20	
Toluene	5.00	0.0250	5.00	0.0757	98.4	61-130	3.11	20	
o-Xylene	4.96	0.0250	5.00	ND	99.1	63-131	3.22	20	
p,m-Xylene	9.95	0.0500	10.0	0.0702	98.8	63-131	3.19	20	
Total Xylenes	14.9	0.0250	15.0	0.0702	98.9	63-131	3.20	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.08*		*8.00*		*101*	*70-130*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:03:33PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327003-BLK1)									Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.69*		*8.00*		*83.6*	*70-130*			
LCS (2327003-BS2)									Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	48.4	20.0	50.0		96.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.20*		*8.00*		*90.0*	*70-130*			
Matrix Spike (2327003-MS2)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	48.7	20.0	50.0	ND	97.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.02*		*8.00*		*87.7*	*70-130*			
Matrix Spike Dup (2327003-MSD2)				**Source: E306248-23**					Prepared: 07/05/23 Analyzed: 07/05/23
Gasoline Range Organics (C6-C10)	47.4	20.0	50.0	ND	94.9	70-130	2.62	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.02*		*8.00*		*87.8*	*70-130*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:03:33PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327033-BLK1)									Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*46.0*		*50.0*		*91.9*	*50-200*			
LCS (2327033-BS1)									Prepared: 07/06/23 Analyzed: 07/10/23
Diesel Range Organics (C10-C28)	239	25.0	250		95.6	38-132			
Surrogate: n-Nonane	*45.4*		*50.0*		*90.8*	*50-200*			
Matrix Spike (2327033-MS1)				**Source: E306236-04**					Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	366	25.0	250	93.6	109	38-132			
Surrogate: n-Nonane	*41.0*		*50.0*		*81.9*	*50-200*			
Matrix Spike Dup (2327033-MSD1)				**Source: E306236-04**					Prepared: 07/06/23 Analyzed: 07/07/23
Diesel Range Organics (C10-C28)	383	25.0	250	93.6	116	38-132	4.62	20	
Surrogate: n-Nonane	*42.0*		*50.0*		*84.1*	*50-200*			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	**Reported:**
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/10/2023 3:03:33PM

Anions by EPA 300.0/9056A

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2327028-BLK1)									Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	ND	20.0							
LCS (2327028-BS1)									Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	253	20.0	250		101	90-110			
Matrix Spike (2327028-MS1)				**Source: E306247-01**					Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	277	20.0	250	28.9	99.3	80-120			
Matrix Spike Dup (2327028-MSD1)				**Source: E306247-01**					Prepared: 07/06/23 Analyzed: 07/07/23
Chloride	277	20.0	250	28.9	99.3	80-120	0.00794	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Definitions and Notes

WPX Energy - Carlsbad	Project Name:	Toro 22-3H	
5315 Buena Vista Dr	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Anna Byers	07/10/23 15:03

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Project Information

Chain of Custody

Client: WPX Energy Permian LLC.	Bill To	Lab Use Only	
Project: Toro 22-3H	Attention: Jim Raley	Lab WO#: E307004	Job Number: 01058-0007
Project Manager: Anna Buyer	Address: 5315 Buena Vista Dr.		
Address: 13000 W County Rd 100	City, State, Zip: Carlsbad, NM, 88220	Analysis and Method	
City, State, Zip_Odessa,TX, 79765	Phone: 575-885-7502		
Phone: (575) 200-6754	Email: jim.raley@dvn.com		
Email: Devon-team@etechenv.com	WO: EE.151032.01.ABD		
Collected by: Edyte Konan	Incident ID: nOY1727952679		

TAT: 1D	2D	3D	Standard
			5 day TAT

EPA Program: CWA	SDWA
	RCRA

State: NM	CO	UT	AZ	TX	

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM		GDOC TX		Remarks
9:10	6/30/2023	S	1	PH03	1	21'								X				

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by:

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Edyte Konan	06/30/2023	14:20	Michelle R Gonzales	6-30-23	1420
Michelle R Gonzales	6-30-23	1615	Caitlin Man[illegible]	7/5/23	8:15

Lab Use Only
Received on Ice: (Y) / N
T1 ______ T2 ______ T3 ______
AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other ________

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory

Printed: 7/5/2023 9:18:37AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	WPX Energy - Carlsbad	Date Received:	07/05/23 08:15	Work Order ID:	E307004
Phone:	(575) 200-6754	Date Logged In:	07/05/23 09:16	Logged In By:	Caitlin Mars
Email:	anna@etechenv.vom	Due Date:	07/11/23 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes	
2. Does the number of samples per sampling site location match the COC	Yes	
3. Were samples dropped off by client or carrier?	Yes	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Comments/Resolution

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT?	Yes

Sample Cooler

7. Was a sample cooler received?	Yes
8. If yes, was cooler received in good condition?	Yes
9. Was the sample(s) received intact, i.e., not broken?	Yes
10. Were custody/security seals present?	No
11. If yes, were custody/security seals intact?	NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling	Yes
13. If no visible ice, record the temperature. Actual sample temperature: 4°C	

Sample Container

14. Are aqueous VOC samples present?	No
15. Are VOC samples collected in VOA Vials?	NA
16. Is the head space less than 6-8 mm (pea sized or less)?	NA
17. Was a trip blank (TB) included for VOC analyses?	NA
18. Are non-VOC samples collected in the correct containers?	Yes
19. Is the appropriate volume/weight or number of sample containers collected?	Yes

Field Label

20. Were field sample labels filled out with the minimum information:	
Sample ID?	Yes
Date/Time Collected?	Yes
Collectors name?	Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved?	No
22. Are sample(s) correctly preserved?	NA
24. Is lab filteration required and/or requested for dissolved metals?	No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase?	No
27. If yes, does the COC specify which phase(s) is to be analyzed?	NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory?	No	
29. Was a subcontract laboratory specified by the client and if so who?	NA	Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date

envirotech Inc.

APPENDIX G

NMOCD Correspondence

Anna Byers

From: Raley, Jim <Jim.Raley@dvn.com>
Sent: Wednesday, May 17, 2023 4:17 PM
To: Anna Byers
Subject: FW: [EXTERNAL] WPX Site Sampling Activity Update (1/3 -1/6)

Jim Raley | Environmental Professional - Permian Basin
5315 Buena Vista Dr., Carlsbad, NM 88220
C: (575)689-7597 | jim.raley@dvn.com

devon

From: Raley, Jim <Jim.Raley@dvn.com>
Date: Wednesday, May 17, 2023 at 1:38 PM
To: Joseph Hernandez <joseph@etechenv.com>
Subject: FW: [EXTERNAL] WPX Site Sampling Activity Update (1/3 -1/6)

Jim Raley | Environmental Professional - Permian Basin
5315 Buena Vista Dr., Carlsbad, NM 88220
C: (575)689-7597 | jim.raley@dvn.com

devon

From: Erick Herrera <eherrera@ensolum.com>
Date: Wednesday, December 28, 2022 at 3:43 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>, 'CFO_Spill, BLM_NM' <blm_nm_cfo_spill@blm.gov>
Cc: Raley, Jim <Jim.Raley@dvn.com>, Devon Team <Devon-Team@ensolum.com>
Subject: [EXTERNAL] WPX Site Sampling Activity Update (1/3 -1/6)

Good Afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between January 3 – January 6, 2023:

Site Name: Toro 22-3H
API: 30-025-35253
Incident Number: nOY1727952679

Thank you,

Erick Herrera
Staff Geologist
281-777-4152
Ensolum, LLC

Erick Herrera

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Tuesday, June 27, 2023 11:53 AM
To: Erick Herrera
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] WPX Site Sampling Activity Update (6/29-6/30)

Erick,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Erick Herrera <erick@etechenv.com>
Sent: Monday, June 26, 2023 3:43 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Raley, Jim <jim.raley@dvn.com>; Devon-Team <Devon-Team@etechenv.com>
Subject: [EXTERNAL] WPX Site Sampling Activity Update (6/29-6/30)

Good afternoon,

WPX also anticipates conducting confirmation soil sampling activities at the following site between June 29 – June 30, 2023.

Site Name: Toro 22-3
API: 30-025-35253
Incident Number: nOY1727952679

Thank you,

Erick Herrera
Staff Geologist

Environmental & Safety Solutions, Inc.

Work: (432) 305-6416
Cell: (281) 777-4152

Joseph Hernandez

From: Joseph Hernandez
Sent: Tuesday, June 27, 2023 10:12 AM
To: Raley, Jim
Cc: Anna Byers
Subject: FW: [EXTERNAL] The Oil Conservation Division (OCD) has rejected the application, Application ID: 219749

Joseph S. Hernandez
Senior Managing Geologist
eTECH Environmental & Safety Solutions, Inc.
Work: (432) 305-6413
Cell: (281) 702-2329

From: Joseph Hernandez
Sent: Monday, June 26, 2023 5:36 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Anna Byers <anna@etechenv.com>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: Re: [EXTERNAL] The Oil Conservation Division (OCD) has rejected the application, Application ID: 219749

Nelson,

We will proceed with your recommended approach with advancement to same total depth to confirm chloride concentrations. We will include that data in the revised report.

Thanks

Sent from my iPhone

> On Jun 26, 2023, at 4:53 PM, Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov> wrote:
>
> Hey Joe,
>
> Thanks for the notification. Please keep a copy of this communication for inclusion within the appropriate report submittal.
>
> The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Talked with my supervisor last week about the email write up you suggested and he directed me not to do so.

Please proceed with whatever approach you feel can adequately define the lateral and vertical extent of the impacts.

If you have any questions or concerns, please contact me via email or telephone #.

Regards,

Nelson Velez ● Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/
<Outlook-kagggro0.png>

From: Joseph Hernandez <joseph@etechenv.com>
Sent: Monday, June 26, 2023 3:09 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Anna Byers <anna@etechenv.com>
Subject: RE: [EXTERNAL] The Oil Conservation Division (OCD) has rejected the application, Application ID: 219749

Hi Nelson,

We were going to perform the sampling as you requested this Thursday or Friday. Did you send the email with conditions/summary we discussed?

Thanks,

Joseph S. Hernandez
Senior Managing Geologist
<image001.png>

Work: (432) 305-6413
Cell: (281) 702-2329

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Wednesday, June 21, 2023 11:40 AM
To: Joseph Hernandez <joseph@etechenv.com>
Cc: Anna Byers <anna@etechenv.com>
Subject: Re: [EXTERNAL] The Oil Conservation Division (OCD) has rejected the application, Application ID: 219749

Joseph,

We can discuss tomorrow. Hrs. available between 8-10 am & 12:00-2:30 pm.

Let me know what time. Thanks.

Regards,

Nelson Velez ● Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/
<image002.png>

From: Joseph Hernandez <joseph@etechenv.com>
Sent: Wednesday, June 21, 2023 10:31 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Anna Byers <anna@etechenv.com>
Subject: FW: [EXTERNAL] The Oil Conservation Division (OCD) has rejected the application, Application ID: 219749

Nelson,

I'm assisting Jim Raley with this project - do you have time tomorrow to discuss this denial?

Thanks,

Joseph S. Hernandez
Senior Managing Geologist
<image001.png>

Work: (432) 305-6413
Cell: (281) 702-2329

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Tuesday, June 20, 2023 2:12 PM
To: Raley, Jim <Jim.Raley@dvn.com>
Subject: [EXTERNAL] The Oil Conservation Division (OCD) has rejected the application, Application ID: 219749

To whom it may concern (c/o James Raley for WPX Energy Permian, LLC),
The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nOY1727952679,
for the following reasons:

- **1. Site assessment has not been fully delineated horizontally or vertically. 2. Site characterization data incomplete. Please provide supporting documentation for those items missing from the list on page 3 of Form C-141 in next submittal or final closure report. 3. Once bullet #1 has been achieved, operator is required to re-submit its revised remediation plan or final closure report. 4. Operator has 90 days (September 18, 2023) to fully delineate, re-submit its remediation plan, or submit final closure report.**

- **Horizontal delineation submitted was incomplete and did not meet the requirements of 19.15.29.11 NMAC. The values for determination of horizontal impact are derived by either approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less. This is especially important for "on-pad" releases to ensure the release did not extend to the "off-pad"/pasture area. A visual footprint on the surface is not sufficient to assess the horizontal extent of the release. Laboratory data must be provided as evidence of delineation efforts. Any sample exceeding approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less requires additional samples for horizontal delineation.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 219749.
Please review and make the required correction(s) prior to resubmitting.
If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.
Thank you,
Nelson Velez
Environmental Specialist - Advanced
505-469-6146
Nelson.Velez@emnrd.nm.gov
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 244562
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	7/31/2023