

# **REMEDIATION WORK PLAN**

North Brushy PW Line Remediation Plan is approved to include the following conditions of approval: The excavation will be required to the maximum extent practicable within the pipeline right-of-way for both releases. Once WPX believes it has excavated to the maximum extent practicable, please contact the OCD before moving forward. In the event that a pipeline operator does not allow excavation near and around any pipeline to allow the excavation to take place, the OCD requests a letter from the operator indicating they will accept responsibility and liability for remediation. At this time, the variance request to leave chloride contamination in place between 5' to 38' is not approved. The request to collect sidewall confirmation samples representative of 1000 square feet and no confirmation floor samples is not approved. .Based on submitted groundwater lab analyses provided, the OCD has reasonable evidence to believe that groundwater in the areas of concern has been impacted.

North Brushy PW Line Eddy County, New Mexico Incident Numbers nAPP2231126594 nAPP2312845934

Prepared For: WPX Energy Permian, LLC 5315 Buena Vista Dr. Carlsbad, NM 88220

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### **SYNOPSIS**

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of WPX Energy Permian, LLC (WPX), presents the following Remediation Work Plan (RWP) to provide a detailed evaluation and interpretation for the plume of subsurface impacts associated with two inadvertent releases of produced water at the North Brushy PW Line (Site). WPX respectfully submits this RWP, which summarizes response efforts, soil sampling activities, electrical resistivity imaging (ERI) data in conjunction with observed soil/geological conditions and outlines a proposal for a corrective action plan to rectify environmental impacts.

## SITE LOCATION AND RELEASE BACKGROUND

The Site is located in Unit L, Section 12, Township 26 South, Range 29 East, in Eddy County, New Mexico (32.054442°, -103.942938°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM) (**Figure 1** in **Appendix A**). The area of the releases overlies an expansive pipeline Right-of-Way (ROW), which includes 5 high pressure gas subsurface lines and 1 produced water line, ranging from 4 to 6 feet below ground surface (bgs). An aerial image of the Site is depicted below:



#### nAPP2231126594

On October 25, 2022, a failed produced water gathering line was discovered to have released greater than 100 barrels (bbls) of produced water into the pasture, intersecting the adjacent multiple pipeline ROW. The source was stopped, and the poly line was repaired. Due to limited access to the release area, no fluids were able to be recovered. The release footprint was mapped by a third-party environmental consultant using a Global Positioning System (GPS). WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on November 7, 2022, and was subsequently assigned Incident Number nAPP2231126594. **Figure 2** in **Appendix A** depicts the observed release footprint, hereafter referred to as Release Area #1.

Due to difficulties accessing the Site, special ROW permitting from BLM for construction of a road and within the release area was required. Devon submitted a sundry request via Form 3160-5 for the proposed work area and BLM issued the following stipulations before conducting mechanical operations: karst potential survey, biology, hydrogeology, and cultural resources review. Once the conditions were met, the BLM approved the commencement of road improvements and access with a cultural monitor present in December of 2022.

#### nAPP2312845934

On May 3, 2023, the weld of the previously repaired poly line failed, causing 237 bbls of produced water to be released to the same area previously impacted on October 25, 2022. No fluids were recovered. On May 4, 2023, Etech mapped the observed release footprint using a GPS. WPX reported the release to the NMOCD on a Form C-141 on May 8, 2023, and was subsequently assigned Incident Number nAPP2312845934. **Figure 2** in **Appendix A** depicts the observed release footprint, hereafter referred to as Release Area #2.

Upon further review, it was estimated that 4,200 bbls of produced water associated with nAPP2231126594 was released based on observations encountered from the release control efforts associated with nAPP2312845934. An updated Form C-141 for nAPP2231126594 is provided with corrected release volume details.

#### **GENERAL TIMELINE SUMMARY**

October 25, 2022 – Inadvertent release Incident Number nAPP2231126594 occurred.

**November 10, 2022** – Following the request for BLM access to begin impact investigation, BLM required extensive karst and cultural surveys to be conducted for the release area and road improvement area to allow access to the site. This area included approximately 318 acres or 13.863 million square feet.

November 29, 2022 - The karst survey and report was completed.

December 2, 2022 - The karst survey report was submitted to the BLM for review.

January 9, 2023 – The BLM granted access to improve Site access road conditions in preparation of remediation activities.

*January 17, 2023* – Extension for Incident Number nAPP2231126594 was filed for April 23, 2023, due to building/improving road to spill location measuring approximately 1.73 miles.

February 16, 2023 – Drilling activities for soil investigation begins.

*April 13, 2023* – Extension for Incident Number nAPP2231126594 was filed for July 22, 2023, to conduct additional delineation activities.

*May 3, 2023* – Inadvertent release Incident Number nAPP2312845934 occurred and overlapped areas associated with Incident Number nAPP2231126594.

*June 6, 2023* – Extensions for Incident Numbers nAPP2231126594 and nAPP2312845934 were filed for October 20, 2023, to reevaluate delineation data collected prior to the new release and to schedule a drilling rig to return to the Site to collect additional data and submit a work plan.

*July 13, 2023* – WPX requested an extension of the approved BLM access area to create a clearance to conduct an ERI survey that would assist with planning and proposal of a work plan for the two incidents.

July 24, 2023 – WPX followed up with BLM for an update for access extension for ERI survey.

July 28, 2023 – Additional drilling completed.

August 2, 2023, August 18, 2023, and August 30, 2023 – WPX followed up again with BLM for an update for access extension for ERI survey.

**September 14, 2023** – WPX communicated with the BLM via phone call to expedite the review of the access extension. BLM verbally approved the work to non-mechanically clear the area required to conduct the ERI Survey.

September 25, 2023 - ERI field survey completed.

*October 11, 2023* – Extension requests for Incident Numbers nAPP2231126594 and nAPP2312845934 were filed for December 19, 2023, due to the delay from the BLM to grant additional pasture access to conduct the ERI survey. The extension request was denied by the NMOCD.

**October 20, 2023** – A Soil Characterization Report (SCR) was submitted to the NMOCD for review that included response efforts, soil sampling activities and remediation objectives to assist with developing a formal work plan that would include the ERI survey to assist with interpreting potential subsurface impacts.

October 27, 2023 – ERI survey report completed and submitted to WPX.

*March 18, 2024* – The SCR submitted for the incidents was rejected by the NMOCD with the following remarks:

"Remediation plan denied. Remediation plan is not in compliance with 19.15.29.12 NMAC. Delineation of release is incomplete, and the report does not include a scope of work for corrective actions. After three extension approvals, with a final extension date of October 20th, 2023, a complete and accurate report has yet to be submitted. Submit a complete report through the OCD Permitting website by 04/15/2024. Failure to submit a complete remediation plan and/or remediation closure report by 04/15/2024 is subject to compliance and enforcement penalties pursuant to 19.15.5 NMAC."

## 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 nearest permitted water well with depth to water data was United States Geological Survey (USGS) well 320301103572201, located approximately 0.80 miles southwest of the Site (**Figure 1A** in **Appendix A**). USGS well 320301103572201 has a reported depth of water 120.86 feet below ground surface (bgs) from 1992. Well records for referenced wells are provided in **Appendix B**.

Based on a desktop review, the Site was determined to be within 300 feet of an ephemeral riverine and within a 100-year floodplain. The Site is located in a designated medium karst potential area. Receptor details from the site characterization are included in **Figure 1B** and **Figure 1C** in **Appendix A**.

Based on the results from the desktop review, specifically the proximity to a significant watercourse and 100-year floodplain, the following Closure Criteria was applied:

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

<sup>†</sup>The reclamation standard concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.

## SOIL SAMPLING ACTIVITIES

From late-January through July 28, 2023, a third-party environmental consultant and/or Etech conducted delineation activities to assess the Site for the presence or absence of residual soil impacts associated with Release Area #1 and Release Area #2, hereafter referred to as the Area of Concern (AOC). Surface soil samples (SS) were also collected at 0.5-feet bgs in order to define the immediate horizontal periphery of visually identified impacts. Delineation activities were advanced within the AOC via hand auger until refusal and subsequently advanced by heavy equipment (backhoe and/or drill rig), which were driven by field screening soil for volatile organic compounds (VOCs) utilizing a photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. A minimum of two soil samples were collected per delineation soil sampling location, as denoted by borehole (BH) and/or pothole (PH) soil sample nomenclature, representing the highest observed field screening concentrations and the greatest depth. It should be noted that additional advancement in areas previously sampled warranted nomenclature variation such that a "BH" initiated with a hand auger was updated to "PH" whenever continued with a backhoe and reverted to "BH" if further advanced with a drill rig. In such a scenario, further advancement took place within 5 feet of the original delineation location, given the accuracy of the GPS and/or as to avoid sampling "sluff" from a backfilled pothole. Field screening results and soil descriptions are included on soil sampling logs shown in Appendix C. The delineation soil sample locations are shown in Figure 3 in Appendix A.

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 (Envirotech) in Carlsbad, New Mexico, for analysis of COCs.

All borings were permitted and completed under the OSE regulations and advanced following standard industry practice by Talon LPE.

## SOIL LABORATORY SOIL ANALYTICAL RESULTS

Elevated chloride exceedances above the Closure Criteria were identified in all delineation soil samples collected within the AOC from 0.5-foot bgs to 30 feet bgs, characterized by concentrations ranging from 4,600 mg/kg to 13,000 mg/kg, respectively. Benzene and BTEX concentrations in soil were compliant with the Closure Criteria. TPH in soil exceeded the Closure Criteria at BH07 (4 feet bgs) and BH12 (12 feet bgs), at 577 mg/kg and 129 mg/kg, respectively. Laboratory analytical results are summarized in **Table 1** 

included in **Appendix E**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix F**. In general, the vertical extent of the AOC was fully delineated to the applicable Closure Criteria with representative clean boundaries ranging from 4 feet bgs to 38 feet bgs (nearest the source).

### SUBSURFACE BORING FLUID

During delineation activities, it appeared that unrecovered fluids settled within potential perched water zones present only in portions of the subsurface associated with the AOC, specifically:

• BH13, BH16, BH17<sup>NC</sup>, and BH21

<sup>NC</sup> indicates boring not constructed. Additional borings were performed to later develop a cross section of the AOC subsurface and investigate the potential for additional perched water zones, specifically:

• BH14, BH18, BH19, and BH22

Excluding BH17, all borings that encountered fluids/perched groundwater were constructed with a 2-inch inside diameter (ID) Schedule 40 polyvinyl chloride (PVC) casing a screen. The screen was factory-slotted with 0.010-inch slot size. A 5-to-10-foot screen was placed across the water-bearing unit with the bottom screen set just above the total depth (TD) of the well. A 10-20 size silica sand pack was utilized to fill the annular space from the bottom of the screen to approximately 2 feet above the top of screen. The sand pack was overlain by hydrated bentonite chips to the ground surface. The delineation soil sample/well locations are shown in **Figure 4** in **Appendix A**. It should be noted that potential perched water observed was within and around the eastern side of the AOC footprint and not west or southwest.

After allowing to stabilize for at least 24 hours after well completion, the wells were developed by purging a minimum of 10-casing volumes or until the well was purged dry. The casing volume was determined by measuring the depth to water and TD using an oil-water interface probe then multiplying the water column thickness by well inner area.

Due to encountering fluid while drilling and potentially encountering perched groundwater zones, samples were collected and submitted to Eurofins for analysis of bicarbonates, carbonates, total alkalinity, free carbon dioxide, carbon dioxide, cation-anion balance, iron, manganese, and total dissolved solids (TDS) following Standard Method 2320B; chloride, sulfate, nitrite, and nitrate following EPA Method 300.0 Anions; calcium, magnesium, potassium, and sodium following EPA Method 200.7 Metals. Groundwater analytical results would be compared to New Mexico Water Quality Control Commission (NMWQCC) standards set in 20.6.2 NMAC as a method of evaluation. Sampling of the water column was only performed once the well recharged for a minimum of 24 hours post development. Depth to water was also measured below the top of casing before each sampling event and purged before any sample collection by removing at minimum, three casing volumes, or until the well ran dry.

### SUBSURFACE LABORATORY WATER ANALYTICAL RESULTS

Elevated concentrations were present in wells (excluding BH18) within and around the AOC on sampled on <u>August 18, 2023</u>:

- BH13<sup>IR</sup> TDS (27,400 mg/Liter (L)); Chloride (13,400 mg/L); Iron (1.16 mg/L); Manganese (0.266 mg/L)
- BH14 TDS (13,200 mg/L); Chloride (5,750 mg/L); Iron (4.36 mg/L); Manganese (0.533 mg/L)
- BH19 TDS (1,770 mg/L)
- BH21<sup>IR</sup> TDS (11,200 mg/L); Chloride (3,690 mg/L)

• BH22 – TDS (1,220 mg/L); Chloride (334 mg/L)

Elevated concentrations were present in wells (excluding BH18) within and around the AOC on sampled on <u>March 26, 2024</u>:

- BH13<sup>IR</sup> TDS (16,400 mg/L); Chloride (8,040 mg/L)
- BH19 TDS (2,330 mg/L); Iron (10.7 mg/L); Manganese (1.11 mg/L)
- BH21<sup>IR</sup> TDS (14,300 mg/L); Chloride (4,980 mg/L)
- BH22 TDS (1,800 mg/L); Chloride (422 mg/L); Iron (18.6 mg/L)

<sup>IR</sup> indicates boring was inside the AOC.

Laboratory analytical results are summarized in **Table 2** included in **Appendix E**. The executed chain-ofcustody forms and laboratory analytical reports are provided in **Appendix F**. Water analysis for BH14 on March 26, 2024, was not conducted due to insufficient volume of fluid required for testing in well post purging.

## SUBSURFACE GEOLOGY

Based on soil observations encountered during delineation activities, it was determined that groundwater within the AOC, where the release fluids settled, was held within a lens of poorly graded sand bounded by a clayey sand series. The cross section below illustrates the geological interpretation. The interbedded stratigraphy appears to be indicative of natural depositional features associated with a drainage bed. **Figure 4** in **Appendix A** depicts borings used to illustrate the cross section.





Remediation Work Plan Incident Numbers nAPP2231126594 & nAPP2312845934 North Brushy PW Line

## SUBSURFACE WATER AND FLUID RECOVERY

While water was detected in the perched water-bearing zone, it appears to have limited volume and/or recharge potential as the depth of water was stabilized or decreased between well measurement dates. The area where the releases occurred was likely fed by surface water infiltration (rainfall and/or snowfall events) that is temporarily stored within low spots in the more porous poorly graded sand layer on top of the clayey sand. To supplement this determination, between May 15, 2023, and March 25, 2024, Etech purged wells BH13, BH14, and BH21 and recovered approximately 1,500 gallons of fluid via hand bailing and staged onsite inside 275 and/or 550-gallon totes. One new bailer was used and dedicated to each well throughout fluid recovery efforts to avoid cross-contamination. It should be noted that, on May 18, 2023, an effort to recover fluids from subsurface was attempted via hydrovacuum was used to recover fluids from the wells with a 2-inch fitting from the vacuum hose to the 2-inch PVC well top. Fluid recovery via these methods was unsuccessful, likely due to insufficient vacuum and/or low fluid volume in wells.

A log was recorded based on field notes with starting and current TD of groundwater, increased depth to water and water column results over time:

- BH13<sup>P</sup> 16.35<sup>S</sup> feet bgs; 21.01<sup>C</sup> feet bgs
  - Water column: 7.65<sup>s</sup> feet; 2.99<sup>c</sup> feet
- BH14<sup>P</sup> 15.00<sup>S</sup> feet bgs; 19.90<sup>C</sup> feet bgs
  - Water column: 5.17<sup>s</sup> feet; 0.27<sup>c</sup> feet
- BH16<sup>P</sup> 14.92<sup>S</sup> feet bgs; 15.50<sup>C</sup> feet bgs
  - Water column: 0.58<sup>s</sup> feet; 0.00<sup>c</sup> feet
- BH18 15.82<sup>s</sup> feet bgs; 19.20<sup>c</sup> feet bgs
  - Water column: 3.6<sup>S</sup> feet; 0.00<sup>C</sup> feet
- BH19 22.33<sup>s</sup> feet bgs; 27.52<sup>c</sup> feet bgs
  - Water column: 8.14<sup>s</sup> feet; 2.95<sup>c</sup> feet
- BH21<sup>P</sup> 18.80<sup>S</sup> feet bgs; 19.35<sup>C</sup> feet bgs
  - Water column: 2.6<sup>s</sup> feet; 2.05<sup>c</sup> feet
- BH22 19.80<sup>s</sup> feet bgs; 19.73<sup>c</sup> feet bgs
  - Water column: 8.21<sup>s</sup> feet; 8.28<sup>c</sup> feet

<sup>s</sup> indicates starting depth of groundwater or water column.

<sup>c</sup> indicates current depth of groundwater or water column.

<sup>P</sup> indicates well was sampled.

A graph depicting the decreasing water column trend over time is shown below:



## ELECTRORESITIVITY SURVEY AND TRUE GROUNDWATER ZONE

During delineation activities, Etech advanced a boring south of the release at BH20 to assist with the regional groundwater determination at the Site. BH20 was advanced to 103 feet bgs without encountering water throughout the drilling process. Subsequently, Etech retained Southwest Geophysical Consulting, LLC. (Southwest Geophysical) to conduct an ERI survey for the purpose of evaluating the probability of impacts reaching the true groundwater table.

Based on the results from the survey, a low resistivity anomaly (discontinuous perched aquifer) was found beneath the surface from 43 feet to 104 feet bgs (interpretation model from the ERI report illustrated below) and further supports drilling findings. The low resistivity value range identified within the survey boundaries may be associated with either an aquifer, layers of moist to saturated halite or clay. When correlating the ERI survey results with nearby soil borings and general Site geology, the low resistivity anomaly coincides with an observed dry clay layer and appears to be the most likely case for the anomaly.

The perched water zone encountered during drilling activities is not clearly displayed in the ERI imaging due to the desired depth of the survey (121 to 164 feet bgs), which required 4-meter electrode spacing and in turn decreased the imagery resolution. However, the ER survey depth and resolution was chosen to provide an overall picture of the subsurface geology and an understanding of location(s) for potential perched zones and/or groundwater. All the delineation soil sampling locations advanced to or beyond 20 feet bgs have been vertically delineated to the Site Closure Criteria, except BH13 which was advanced up to 30 feet bgs, before reaching the depth(s) of the low resistivity anomaly interpreted as clay based on process knowledge of observed soil horizons encountered throughout drilling at the Site. As such, it is inferred that while concentrations of TDS, chloride and/or iron and manganese in the perched water-bearing units appear to be elevated, it does not appear to have impacted the true groundwater table which is beyond 103 feet bgs based on BH20 and subsequent ERI survey investigation. The complete ERI report is provided in **Appendix G**.



Figure 5: 2D inverted resistivity section. Reds and oranges indicate higher resistivity values. Yellows and greens are medium resistivity values. Blues are low resistivity values. Red dashed line is interpreted as the water table. Vertical purple lines are the boreholes superimposed to the closet location within the resistivity section.

#### **SUMMARY**

Based on the results from the soil investigation of the AOC, water data and ERI survey the following details regarding the characterization are presented:

- A thorough investigation of the AOC and surrounding area was conducted to assess karst potential, biology, hydrogeology, and cultural resources prior to conducting mechanical operations in order to mitigate further affliction to the potential sensitive resources within and/or surrounding the Site. The Site was determined to be within 300 feet of an ephemeral riverine and within a 100year floodplain.
- A ROW containing 5 high pressure gas subsurface lines and 1 produced water line buried at depths ranging from 4 to 6 feet bgs intersect the AOC. In order to remove all residual soil impacts, major deconstruction of the ROW or otherwise engineering a temporary support system to adequately stabilize multiple active high pressure subsurface lines for the duration of excavation activities would present extremely hazardous conditions for personnel, and likelihood for the retracted pipelines to cause a subsequent release by structural collapse, and hazardous chemical release to the atmosphere. Although safety management activities may be planned, the likelihood of these risks are still high as the support systems may fail and/or present new risks with a mechanical excavation advancing below suspended, active pipelines. If WPX were to excavate to Site Closure Criteria, an excavation advanced to depths of the observed clean boundaries would not be possible without devastating other sensitive and protectable areas as the excavation reaches the appropriate depth(s). Depth to groundwater is estimated to be greater than 103 feet bgs based on the dry boring BH20 located at the Site and interpretation of the ERI survey.
- The immediate horizontal periphery has been confirmed with surface soil samples collected surrounding the AOC. Impacts within the AOC are defined and in accordance with the applicable Site Closure Criteria. According to laboratory analytical results, concentrations of COCs exceeding Site Closure Criteria exist up to 38 feet bgs.
- During delineation activities, it appeared that unrecovered fluids settled with potential perched water zones present only in portions of the subsurface associated with the AOC. The area where the releases occurred was likely fed by surface water infiltration (rainfall and/or snowfall events)

that is temporarily stored within the more porous poorly graded sand layer on top of the clayey sand. This interbedded stratigraphy appears to be indicative of natural depositional features associated with a drainage bed.

- A true groundwater zone is estimated to be greater than 103 feet bgs based on a drilled boring, BH20. This finding is consistent with existing regional groundwater data, specifically in reference to USGS well 320301103572201 (approximately 0.8 miles away) which had a reported depth of water 120.86 feet below ground surface (bgs) from 1992. During drilling activities, a series of perched water zones were encountered in which release fluid intermingled. A subsequent ERI survey conducted by Southwest Geophysical identified a discontinuous perched aquifer in the subsurface where the releases occurred, and findings are comparable based on lithologic findings.
- Remediation to date has consisted of removing fluid from the perched water zones via hand bailing. Approximately 1,500 gallons of fluid have been recovered.

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

- WPX requests a variance to leave chloride impacts between 5 feet and up to 38 feet bgs in place (18,347 cubic yards), where elevated concentrations are characterized between 11,800 mg/kg to 4,600 mg/kg. The excavation of the AOC will be further advanced to 7 feet bgs and 15 feet bgs within proximity to delineation soil sample locations BH07 and BH12, respectfully, to remove any remaining residual TPH impacts (577mg/kg and 129 mg/kg) identified during delineation activities.
- To accommodate a properly engineered excavation to the anticipated boundaries consistent with delineation laboratory analytical results, the excavation footprint would extend well beyond the extents of the AOC to facilitate the proper safety measures required to excavate to Site Closure Criteria. As a result, unimpacted grounds would be excavated leading to a greater disruption of existing surface vegetation within a wetland riverine environment. In comparison, the proposed excavation would minimize the unnecessary disturbance of unimpacted ground and protect the sensitive environment whilst still removing the greatest impacts to accommodate vegetative growth.
- To minimize soil disturbance in order to mitigate impacts to groundwater and vegetation, WPX requests that a minimum of five feet of impacted soil be excavated or much as possible without compromising the integrity of the pipelines or increasing safety risks for personnel onsite for the proposed excavation area in conjunction with the advancement to remove TPH impacted soil at delineation soil sampling locations BH07 and BH12; any excavation area(s) advanced beyond 5 feet bgs will be backfilled up to 5 feet bgs, where an acceptable physical barrier will be installed on the excavation floor. The physical barrier will mitigate further migration of chloride impacts into the subsurface. The proposed remediation of the AOC is presented on **Figure 6** in **Appendix A**. The excavation will extend laterally until confirmation soil sample results from the sidewalls of the excavation meet Site Closure Criteria and will provide horizontal delineation of the release.
- Due to the size of the anticipated excavation area(s), WPX requests that excavation confirmation sidewall soil samples represent a maximum of 1,000 square feet per soil sample. Soil samples will be submitted to an accredited laboratory for analyses of chloride, TPH and BTEX. WPX requests that no floor confirmation samples be collected as delineation samples between 5 feet bgs and 30 feet bgs within the AOC are characterized between chloride concentrations of 7,690 mg/kg to 4,600 mg/kg.

- WPX will continue to bail residual fluid from the perched water zones and investigate appropriate pump mechanics in an effort to maximize fluid recovery. Fluid will be continued to be removed from the developed wells until the water chemistry matches the baseline provided by water samples collected from BH18, situated outside and upgradient of the release, or until dry, whichever occurs first, at which time, the wells will be plugged and abandoned following appropriate rules and regulations.
- The proposed excavation will likely require third-party operator oversight and additional safety
  measures near their respective subsurface pipelines before or during excavation activities. WPX
  and/or the third-party operator may implement additional safety precautions above encroachment
  guidelines at their company's discretion for the health and safety of on-site personnel and for the
  structural integrity of utilities. Such restrictions include but are not limited to:
  - i. Shifting the proposed excavation extent(s) to adhere to established buffer zone(s) around one or more utilities.
  - ii. Inducing a change in proposed excavation(s) depth(s) around one or more utilities.
- Upon receipt and review of excavation confirmation soil sample laboratory analytical results, WPX will determine the appropriate measure of corrective actions that will include:
  - i. Documenting the removal of impacted soil and restoration at the Site with a subsequent Closure detailing assessment, sampling activities, and Site restoration activities including, but not limited to backfilling the excavation with clean, locally sourced soil and restored to "as close to its original state as possible."

WPX believes this RWP will meet requirements set forth in NMAC 19.15.29.13 and be protective of human health, the environment and groundwater. As such, WPX respectfully requests approval of this RWP from NMOCD.

If you have any questions or comments, please do not hesitate to contact Joseph Hernandez at (281) 702-2329 or joseph@etechenv.com or Gilbert Moreno at (832) 541-7719 or gilbert@etechenv.com. **Appendix H** provides correspondence email notification receipts associated with the subject releases.

Sincerely, Etech Environmental and Safety Solutions, Inc.

Gilbert Moreno Project Geologist

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Joseph S. Hernandez Senior Managing Geologist

cc: Jim Raley, WPX New Mexico Oil Conservation Division Bureau of Land Management

## Appendices:

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## APPENDIX A

## Figures

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





Released to Imaging: 2/17/2025 2:02:20 PM







#### Received by OCD: 4/15/2024 2:04:17 PM



Released to Imaging: 2/17/2025 2:02:20 PM

Received by OCD: 4/15/2024 2:04:17 PM



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**Released to Imaging: 2/17/2025 2:02:20 PM** 

#### Received by OCD: 4/15/2024 2:04:17 PM



**Released to Imaging: 2/17/2025 2:02:20 PM** 

## **APPENDIX B**

## **Referenced Well Records**

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



USGS Home Contact USGS Search USGS



National Water Information System: Web Interface

USGS Water Resources

 Data Category:
 Geographic Area:

 Groundwater
 V
 United States
 GO

#### Click to hideNews Bulletins

- 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: <u>Next Generation Monitoring Location Page</u>

#### Search Results -- 1 sites found

Agency code = usgs

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

#### USGS 320301103572201 26S.29E.16.213241

Eddy County, New Mexico Latitude 32°03'01", Longitude 103°57'22" NAD27 Land-surface elevation 2,958 feet above NAVD88 The depth of the well is 335 feet below land surface. This well is completed in the Other aquifers (N9999OTHER) national aquifer. This well is completed in the Rustler Formation (312RSLR) local aquifer.

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 measur
1949-01-03		D	62610		2831.41	NGVD29	1	Z	1	
1949-01-03		D	62611		2832.97	NAVD88	1	Z	<u>.</u>	
1949-01-03		D	72019	125.03			1	Z	1	
1977-03-09		D	62610		2831.59	NGVD29	1	Z	<u>.</u>	
1977-03-09		D	62611		2833.15	NAVD88	1	Z	1	
1977-03-09		D	72019	124.85			1	Z	1	
1978-01-17		D	62610		2832.82	NGVD29	1	Z	1	
1978-01-17		D	62611		2834.38	NAVD88	1	Z		
1978-01-17		D	72019	123.62			1	Z	1	
1987-10-14		D	62610		2834.90	NGVD29	1	Z	1	
1987-10-14		D	62611		2836.46	NAVD88	1	Z	1	
1987-10-14		D	72019	121.54			1	Z		
1992-11-03		D	62610		2835.58	NGVD29	1	S	5	
1992-11-03		D	62611		2837.14	NAVD88	1	S	5	
1992-11-03		D	72019	120.86			1	S	;	

#### *Received by OCD: 4/15/2024 2:04:17 PM*

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

#### Questions or Comments

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Page Contact Information: <u>USGS Water Data Support Team</u> Page Last Modified: 2023-10-04 11:14:36 EDT 0.27 0.24 nadww01 USA.gov

## APPENDIX C

## Soil Sampling Logs

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



								Sample Name: BH01/PH03/BH12	Date: 1/25/2023-2/16/2023			
							Site Name: North Brushy PW Line					
			F		$\sim$ L			Incident Number: nAPP2231126594 & nAPP2312845934				
						1		Job Number: 18128				
<b>├</b> ──-	ITUO				SAMPLI		<u> </u>					
							1		Method: Auger, Backhoe, Sonic			
Site Coo						lorido Tost	Strine an	Hole Diameter: N/A	Total Depth: 26'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed w 1:4 dilution factor of soil to distilled water. No correction factors included.												
Moisture Content Chloride (ppm) Vapor (ppm) Staining Staining Sample ID Sample ID Sample ID Depth (feet bgs) (feet bgs) USCS/Rock Symbol								Lithologic Descriptions/Notes				
Moist	200	0.1	No	BH01	0.5	0	SP	(0-21') SAND, moist, brown, poorly	-			
Moist	1,500	0.1	No		1	_		grain, trace silt, trace small ca	-			
Moist	6,600	0.2	No		2.0	-		organics, yellow orange stain,	non-organic odor.			
Moist	14,120	2.4	No	BH01	4 –	_		@1' No stain, no organics.				
WOISt	14,120	2.7	NO	DITOT		- 5		@2' Increase in silt.				
Moist	4,152	0	No		6	_						
					Ī	-		@4' Very fine to fine grain, increase	ed silt.			
Moist	2,308	0	No		8 ]	_		Note: Refusal by hand auger @ 4',	BH01 samples submitted 1/25/2023.			
					-	10		@6' Some coarser sand grains, ab	undant small gravel.			
Moist	4,500	0	No	PH03	12	_		@8' Color change to tan to brown,	some coarser sand grains.			
Moist	3,192	1.4	No	BH12	12	-						
					-	_		@11' Color change to light brown				
Moist	7,148	2.3	No	BH12	15	- 15		@11' Color change to light brown.				
moloc	1,110	2.0		DITIE		_ 10		Note: Max reach by backhoe @ 12'	, PH03 Samples submitted 2/7/2023.			
						-						
						_						
						_		@14' Color change to reddish brown.				
					-	-		@16' Color change to tan, poorly consolidated,				
					_	_						
Moist	5,204	0.7	No	BH12	20	- 20		few interbedded dark brown s	anu faminations.			
WOIST	5,204	0.1	110									
Dry	2,272	1.2	No		21	-	SC	(21-26') CLAYEY SAND, dry, tan, fi	ne grain,			
Í						_		poorly graded, abundant inte	-			
Dry	2,444	1.0	No		23	-		clay laminations (<1mm), no	stain, no odor.			
						_						
						_		Note: BH12 samples submitted 2/10	6/2023.			
Dry	Dry 780 1.2 No 24 25											
Dry	<168	1.0	No	BH12	26	20						
							Total [	Depth				
			_									
		-										

							-	Sample Name: BH02 Date: 1/25/2023			
					2			Site Name: North Brushy PW Line			
									Incident Number: nAPP2231126594 & nAPP2312845934		
<u> </u>								Job Number: 18128			
							NGL	JG	Logged By: GM Method: Hand Auger		
Site Co								Hole Diameter: 3" Total Depth: 4'			
								Strips and PID for chloride and vapor, respectively. Chloride test ection factors included.			
Moisture Content	Moisture Content Chloride (ppm) Vapor (ppm) Staining Sample ID Sample ID Sample Depth (feet bgs) (feet bgs) USCS/Rock Symbol								Lithologic Descriptions/Notes		
Maint	4 740	0.0	Vee	BLIOD	0.5		. 0	SP	(0-3') SAND, moist, brown, poorly graded, very fine to fine grain, trace silt, yellow orange stain, no odor.		
Moist	1,716	0.3	res	BH02	0.5	' <u> </u>	_				
						╡			@1' No stain.		
Moist	6,096	0.5	No		1	4	-		@3' Some coarser sand grains, trace small caliche gravel.		
						1	-				
						Ţ	_				
Moist	7,148	0.6	No		2	-	. 2				
							-				
						ļ	_				
						+	-				
						Ť	-				
						1	_				
						- +	-				
						+	-				
						_+			@4' Refusal by hand auger.		
						Ţ	-				
Moist	5,632	0.3	No	BH02	4		4	Total	Depth		
								TOTAL	Сорин		
							_	$\sim$			
	$\sim$										

I		-							1	1	
									Sample Name: BH03	Date: 1/25/2023	
									Site Name: North Brushy PW Line		
		9							Incident Number: nAPP2231126594 & nAPP2312845934		
								Job Number: 18128			
	LITHO	LOGI	C / 3	SOIL	SAM	PLIN	IG LOO	Logged By: GM	Method: Hand Auger		
Site Co	ordinate	s: 32.05	64442	2, -103.9	42938				Hole Diameter: 3"	Total Depth: 4'	
									Strips and PID for chloride and va	apor, respectively. Chloride test	
perform	ned with	1:4 dilut	ion fa	actor of	soil to o	distille	d water.	No corre	ection factors included.		
Moisture Content								_	criptions/Notes		
						+	0	SP	(0-3') SAND, moist, brown, poor		
N4-:-+	0.440	0.0		DUOO		+	-		to fine grain, trace silt, no	stain, no odor.	
Moist	9,116	0.2	No	BH03	0.5	+			@3' Some coarser sand grains	trace small caliche gravel	
						+	-			, date small callene yravel.	
						+					
Moist	4,436	0.1	No		1	Ť	-				
						Ţ	-				
						+					
						+	-				
						+					
Moist	2,448	0.1	No		2	+	. 2				
WOISt	2,440	0.1			2	+	2				
						+	-				
						+					
							-				
						Ť	_				
						T	-				
						1	-				
						+					
						+	-				
						+			@4' Refusal by hand auger.		
						+	-				
Moist	8,396	0.3	No	BH03	4	+	4				
Total Depth									Depth		
								/			
							$\sim$				
			-								
		-									

<b></b>												
		$\frown$				-			Sample Name: BH04 Date: 1/25/2023 Site Name: North Brushy PW Line			
					$\sim$				Incident Number: nAPP2231126594 & nAPP2312845934			
								Incident Number: nAPP2231126594 & nAPP2312845934 Job Number: 18128				
								<u> </u>				
							IG LO	G	Logged By: GM Method: Hand Auger			
	ordinate							de Teet (	Hole Diameter: 3" Total Depth: 4'			
									Strips and PID for chloride and vapor, respectively. Chloride test ection factors included.			
Moisture Content	Moisture Content Chloride (ppm) Vapor (ppm) Staining Sample ID Sample ID Sample Depth (feet bgs) (feet bgs) USCS/Rock Symbol							Lithologic Descriptions/Notes				
Moist	6,204	0.8	Yes	BH04	0.5		0 - -	SP	(0-4') SAND, moist, brown, poorly graded, very fine to fine grain, trace silt, yellow orange stain, no odor.			
Moist	Moist 5,724 3.7 No 2 2								@4' Trace small caliche gravel.			
						+	_		@4' Refusal by hand auger.			
Moist	5,280	2.3	No	BH04	4		4	Total	Denth			
	Moist 5,280 2.3 No BH04 4 4 Total Depth											

										Sample Name: BH05	Date: 1/25/2023		
						-			Site Name: North Brushy PW Line				
				$\equiv$	~					Site Name: North Brushy PW Line Incident Number: nAPP2231126594 & nAPP2312845934			
					5				Job Number: 18128				
	LITHO		C / 9	SOU	SAM		NG		Logged By: GM Method: Hand Auger				
	ordinate								J	Hole Diameter: 3"	Total Depth: 4'		
							сн с	hloric	Strips and PID for chloride and va	-			
									No corre	ection factors included.	por, respectively. Onionae test		
Moisture Content	Moisture Content Chloride (ppm) Vapor (ppm) Staining Sample ID Sample ID Sample Depth (feet bgs) USCS/Rock Symbol							(feet bgs)	Lithologic Descriptions/Notes				
							_	0	SP	(0-2') SAND, moist, brown, poor			
N 4 - 1 - 4	40.470	0.0		DUOF			L			to fine grain, trace silt, yel	llow orange stain, no odor.		
WOIST	12,476	0.3	res	BH05	0.8	- °				@1' No stain.			
						-	- 			@3' Some coarser sand grains			
						-	-						
						_	_			@4' Trace small caliche gravel.			
						-	-						
						_	L	_					
Moist	8,664	0.6	No		2	-	-	2					
						-	-						
						_							
						_	L						
						-	F						
						_	F						
						-	F						
						_							
						-	Ľ			@4' Refusal by hand auger.			
							Ľ						
Moist	12,476	0.6	No	BH05	4			4	Total [	Donth			
									i otai L	лерш			
										/			
			_	$\sim$									
		-											

									Commis Names DU00	Data: 1/25/2022	
								Sample Name: BH06 Date: 1/25/2023 Site Name: North Brushy PW Line			
					2				Site Name: North Brushy PW Line Incident Number: nAPP2231126594 & nAPP2312845934		
					5						
┣──-,					CAM			Job Number: 18128			
Site Co								9	Logged By: GM	Method: Hand Auger	
							`H Chlori	do Tost 9	Hole Diameter: 3" Strips and PID for chloride and va	Total Depth: 4'	
									ection factors included.	apor, respectively. Chionde test	
Moisture Content	Moisture Content Chloride (ppm) Vapor (ppm) Staining Sample ID Sample Depth (feet bgs) (feet bgs) USCS/Rock Symbol							Lithologic Descriptions/Notes			
							0	SP	(0-2') SAND, moist, brown, poor		
Maint	140	0.4	Vaa	DUOC	0.5	+	-		to fine grain, trace silt, ye	llow orange stain, no odor.	
Moist	148	0.4	Yes	BH06	0.5	+	_		@1' No stain.		
						_+	_		@2' Some silt, trace small calid	che gravel.	
						Ŧ	_		@3' Some coarser sand grains		
						+	-				
						Ī	_				
Moiot	6,204	0.4	No		2	-+	- 2				
Moist	0,204	0.4	No		2	+	2				
						+	-				
						Ţ	_				
						4					
						-	-				
						+					
						+	-				
							_				
						Ţ					
						+	-		@4' Refusal by hand auger.		
Moist	6,204	2	No	BH06	4	+	4				
	U, 207	-	1.10		<u> </u>	I	r	Total I	Depth		
							_	$\sim$	-		
						-					
		/	/								

									O - marging Allower of DU107	D-4 4/05/0000			
								Sample Name: BH07 Date: 1/25/2023					
					2				Site Name: North Brushy PW Line Incident Number: nAPP2231126594 & nAPP2312845934				
					5								
	ITUO							Job Number: 18128					
							IG LOO	ז	Logged By: GM	Method: Hand Auger			
	ordinate							to Tast S	Hole Diameter: 3" Strips and PID for chloride and va	Total Depth: 4'			
								No corre	ection factors included.	apor, respectively. Chionde test			
Moisture Content	Moisture Content Chloride (ppm) Vapor (ppm) Staining Sample ID Sample Depth (feet bgs) (feet bgs) USCS/Rock Symbol							Lithologic Des	criptions/Notes				
						Ŧ	0	SP	(0-2') SAND, moist, brown, poor to fine grain, trace silt, ve	rly graded, very fine Ilow orange stain, no odor.			
Moist	2,928	0.4	Yes	BH07	0.5	Ť	-		@1' No stain.				
						+	-						
						+	-		@2' Some silt.				
						Ŧ	-						
						1	_						
						+							
Moist	8,664	0.9	No		2	+	2						
						ļ	-						
						ł							
						Ţ	-						
						-	-						
						1	_						
						Ţ	-						
						+	-						
						ł			@4' Refusal by hand auger.				
						Ť	-						
Moist	8,664	0.7	No	BH07	4		4	<u> </u>	D-m4h				
								Total [	Jeptn				
					_								
				-									
	$\sim$	-											

										Sample Name: BH08/PH02	Date: 1/25/2023-2/7/2023	
									Site Name: North Brushy PW Li			
		5			C				Incident Number: nAPP2231126			
										Job Number: 18128		
LITHOLOGIC / SOIL SAMPLING LOG										Logged By: GM Method: Auger, Backhoe		
Site Coordinates: 32.054442, -103.942938									Hole Diameter: N/A	Total Depth: 10'		
Comments: Field screening conducted with HACH Chloride Test S												
performed with 1:4 dilution factor of soil to distilled water. No correction factors included.												
Moisture Content	Chloride (ppm)	Vapor (ppm)	(ppm) Staining Sample ID Sample Depth (feet bgs) (feet bgs) (feet bgs) USCS/Rock Symbol								criptions/Notes	
Moist	3532	0.4	Yes	BH08	0.9	- 5 - -	-  -	0	SP	(0-10') SAND, moist, brown, poo fine grain, trace silt, trace s organics, yellow orange sta <u>Note:</u> Refusal by hand auger @	small caliche gravel, trace ain, non-organic odor.	
						-	+   +			where a submitted 1/25/2023. @1' No stain, no organics.	u.o , onuo sampie	
						-				@4' Very fine to fine grain, incr	eased silt.	
Moist	4,872	0	No	PH02	5	- - -		5		@8' Some coarser sand grains	, abundant small gravel.	
						-				<u>Note:</u> PH02 samples submitted	2/7/2023.	
Moist	3,532	0	No	PH02	1(	    )		10				
	Moist         3,532         0         No         PH02         10											

								Sample Name: BH09/PH01/BH13	Date: 1/25/2023-2/16/2023	
							Site Name: North Brushy PW Line			
		5					Incident Number: nAPP2231126594 & nAPP2312845934			
						1	Job Number: 18128			
⊩ ,	ITHO		C / 9	SOIL	SAMPLI		Logged By: GM	Method: Auger, Backhoe, Sonic		
	rdinates:						Hole Diameter: N/A	Total Depth: 30'		
						nloride Test		•		
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. No correction factors included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Des	criptions/Notes	
					_	0	SP	(0-14') SAND, moist, brown, poorly (		
Moist	1,740	4.9	Yes	BH09	0.5			fine grain, trace silt, trace smal	-	
					-	-		organics, yellow orange stain, r	-	
				<b>_</b>	. –	<b>_</b>		Note: Refusal by hand auger @ 0.5	, BH09 sample submitted 1/25/2023.	
Moist	4,872	0.4	No	PH01	4 -	- 5		@1' No stain, no organics.		
Moist	10,340	0.2	No		6	- 5		@4' Very fine to fine grain, increase	ed silt.	
Moist	3,832	0	No		8 – 8 –	 - 		@8' Color change to tan, some coa abundant small gravel.	rser sand grains,	
Moist	4,152	0	No		10	10		@12' Trace small gravel.		
						-		Note: Max reach by backhoe @12',	PH01 samples submitted 2/7/2023.	
Moist	4,872	0	No	PH01	12 _	_		(14-22') CLAYEY SAND, moist, yello	-	
				5		-		to fine grain, poorly graded, f		
Moist	6,096	1.6	No	BH13	13 _	_	SC	white to red clay laminations	(<1mm),	
Maiat	E 204	1.0	Na		15 -	15		no stain, no odor.		
Moist	5,204	1.3	No		15 _	_ 15		@17' Color change to pink, clay lan	ninations are	
					-	-		now yellow brown, chloride eff		
									loresence present.	
Moist	3,192	1.4	No	BH13	17	-		(22-23') SAND, wet, tan to brown, po	porly graded, fine	
	.,							grain, no stain, no odor.	, ,	
					-	-		,,		
					-	<b>—</b>		(23-27') CLAYEY SAND, moist, tan	to brown, very fine	
					-	20		grain, poorly graded, few inte		
Wet	4,804	1.0	No	BH13	22	_		sand and reddish, clay lamir	nations (1-3mm),	
						_	SP	no stain, no odor.		
						_				
					_	<u> </u>		(27-29') SAND, moist, tan to brown,		
					-	-	SC	fine grain, no stain, no odor.		
					_	<b>–</b>				
Moist	1,500	1.1	No	BH13	25	25		(29-30') CLAYEY SAND, dry, light b	-	
WOISt	1,300	1.1	110	פווום	- 23	_ 25		grain, poorly graded, few inte sand and reddish clay lamina	-	
					-	<u> </u>	SP	no stain, no odor.		
Moist	6,096	1.0	No		27 -	<b>-</b>				
	2,000					F	sc	Note: BH13 samples submitted 2/16	6/2023.	
Dry	660	1.1	No	BH13	30 -	<b>—</b>			-	
					•		Total [	Depth		

i														
								Sample Name: BH10	Date: 2/16/2023					
								Site Name: North Brushy PW Line						
		5						Incident Number: nAPP2231126594 & nAPP2312845934						
								<u> </u>	Job Number: 18128					
LITHOLOGIC / SOIL SAMPLING LOG									Logged By: GM	Method: Sonic				
Site Coordinates: 32.054442, -103.942938									Hole Diameter: 4.75"	Total Depth: 20'				
Comments: Field screening conducted with HACH Chloride Test S								Strips and PID for chloride and va	-					
performed with 1:4 dilution factor of soil to distilled water. No correction factors included.														
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID Sample Depth (feet bgs) Depth (feet bgs) USCS/Rock Symbol					_	criptions/Notes				
						1	0	SP	(0-5') SAND, moist, brown, pool					
Moist	19,028	0.1	Yes		0.5	+			to fine grain, yellow orange	e staining, no odor.				
						1			@1' No stain.					
				BULLA		+	_							
Moist	14,120	0.6	No	BH10	5	+	5		@5' trace silt.					
						Ŧ								
						Ť			@10' Some coarser sand grair	ns, abundant tan to				
									white small subround gravel	(<1mm).				
Moist	7,148	1	No	BH10	9	+								
						+	. 10		@15' Some silt.					
									(18-20') CLAY, moist, grey to or cohesive, interbedded ye laminations (2-4mm), no	ellow orange fine sand				
Moist	4,436	1	No	BH10	15	1	15							
						+								
						+								
Moist	2,444	1.2	No		18	+		CL						
	_,					+								
						Ţ								
Moist	<168	1.6	No	BH10	20		20	L						
								Total [	Jeptn					
	Sample Name: BH11 Date: 2/16/2023													
--	-----------------------------------	-----	-----	----------	--------	------------	----------------------------------	------------------------------------	---------------------	--	--	--	--	--
						-		Sample Name: North Brushy PW Li						
				$\equiv$				Incident Number: nAPP2231126						
								Job Number: 18128						
I	ІТНО				SAMPLI		2	Logged By: GM	Method: Sonic					
	ordinate						•	Hole Diameter: 4.75"	Total Depth: 30'					
						CH Chlorid	le Test S	Strips and PID for chloride and va	-					
								ection factors included.						
				<u> </u>			¥							
Moisture Content Chloride (ppm) Vapor Vapor (ppm) Staining Sample ID Sample ID Sample ID Depth (feet bgs) (feet bgs) USCS/Rock								Lithologic Des	criptions/Notes					
					_	0	SP	(0-10') SAND, moist, brown, poo						
Moist	2,024	0.6	Yes		0.5	Ļ		to fine grain, trace silt, tra						
					-	F		orange staining, no odor.						
					-	<b> </b> _		@1' No stain.						
Moist	6,096	1	No	BH11	5 -	5								
					-	Γ		@5' Trace small subround grav	vel, no clay.					
					-	_								
					_	_	(10-15') CLAY, moist, grey to re							
Moist	3,772	1.2	No	BH11	10 -	10		cohesive, no stain, no o	dor.					
ivioist	3,112	1.2	NU	ыш	- 10	_ 10	CL	Note: @11' water added to dis	scharge core sample					
Moist	1,400	1	No		11 -	-								
					_			(15-17') SAND, moist, light brow	vn, poorly graded,					
					_			very fine to fine grain, no	o stain, no odor.					
					-									
					_	15	SP	(17-28') CLAY, moist, grey, med						
					-	-	58	cohesive, no stain, no o	dor.					
					_	<b>-</b>		(28-30') CLAYEY SAND, moist,	red. verv fine					
Moist	2,448	1.4	No	BH11	18 _	Ľ	CL	to fine grain, poorly grad	-					
					_			no stain, no odor.						
						Ļ								
Moist	912	1.9	No		19.5 -									
					-	20								
Moist	<168	1	No	BH11	21 -	F								
					-	Γ								
					_									
					-	Ļ								
					–									
Moist	<168	1.2	No	BH11	25 -	25								
					-									
					_	[	SC							
						F								
Moist	<168	0.9	No	BH11	29		Total [	 Denth						
						-	rotart	Jepin						

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Site Name: Notifi Busky PPU Lind           Indiant Number: NATP2211265041           Lithelication Number: Nathenalise Comments: 21 PVC well set at 20: PVC acress from 10 to 20: 1020 silica sand from 6 to 20: Hydrated benome chips from number of 9.           Well Construction Materials Comments: 21 PVC well set at 20: PVC acress from 10 to 20: 1020 silica sand from 6 to 20: Hydrated benome chips from number of 9.           Indiation Number: 10 to 20: 1020 silica sand from 6 to 20: Hydrated benome chips from number of 9.           Indiation Number: 10 to 20: 1020 silica sand from 6 to 20: Hydrated benome chips from number of 9.           Indiation Number: 10 to 20: 1020 silica sand from 6 to 20: Hydrated benome chips from number of 9.           Indiation Number: 10 to 20: 1020 silica sand from 6 to 20: Hydrated benome chips from number of 9.           Indiation Number: 10 to 20: 1020 silica sand from 6 to 20: Hydrated benome chips from number of 9.           Indiation Number: 10 to 20: 1020 silica sand from 6 to 20: Hydrated benome chips from number of 9.           Indiation Number: 10 to 20: 1020 silica sand sintron of to 20: Hydrated benome chips from numolicat									Sample Name: BH14	Date: 3/14/2023		
Indext Number: nAPP221128504 & nAPP2212846934           LITHOLOGIC / SOL SAMPLING LOC         Logget By: GN         Method: Sonic           Logget By: GN         Method: Sonic         Total Depth: 20         TOTM: 14.87           Well Construction Materials/ Comments: 2/ PVC well set at 20' PVC screen from 10' to 20'. 10/20 alics and from 8' to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8' to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8' to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8' to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8' to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8' to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8' to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8' to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8' to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8'. to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8'. to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8'. to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8'. to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8'. to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and from 8'. to 20'. Hydrated bentonite chips from 10' to 20'. 10/20 alics and 10'. 10'. 10'. To 20'. 10/20 alics and 10'. 10'. 10'. 10'. 10'. 10'. 10'. 10'.			$\Box$				n					
Job Number: 19128           Coordinatise: 32.054442103.042303         Legond By: (Mill         Method: Sanie           Coordinatise: 32.054442103.042303         Held Diameter: 6 <sup>1</sup> Total Depth: 20         DTV: 14.8 <sup>1</sup> Well Condituction Materials' Comments: 2 <sup>1</sup> : PVC well set al 20 <sup>1</sup> : PVC screen from 10 <sup>1</sup> to 20 <sup>1</sup> . 10/20 allica sand from 8 <sup>1</sup> to 20 <sup>1</sup> . Hydrated bentonite chips from surface to 8 <sup>1</sup> .         Image: Conditional State			5							4 & nAPP2312845934		
LITHOLOGIC / SOIL SAMPLING LOG         Logged By: GM         Method: Sonic           Conditionates: 32.05442, 10.3942938         Hole Diameter: 6"         Total Daph: 20"         DTW: 14.8"           Will Construction Materials' Comments: 21"PVC well set at 20". PVC screen from 10" to 20". 10/20 allica sand from 8" to 20". Hydrated bentonite chips from surface to 8".         Ithe Diameter: 6"         Total Daph: 20"         DTW: 14.8"           autrace to 8".         Ithe Diameter: 6"         Total Daph: 20"         Hydrated bentonite chips from surface to 8".         Ithe Diameter: 6"         Total Daph: 20"         Ithe Diameter: 6"         Ithe Diameter: 6" <th></th>												
Coordinates 32.054442, -103.942938       Hole Diameter 6*       Total Depth: 20*       DTW: 14.8*         Well Construction Materials/ Comments. 2* PVC well set at 20*. PVC screen from 10* to 20*. 10/20 silica sand from 8* to 20*. Hydrated berlionite chaps from underate to 8*       Image: 10************************************	I	LITHO	LOGI	C / S	SOIL	SAMPLI		}		Method: Sonic		
Well Construction Materials/ Comments: 2" PVC well set at 20". PVC screen from 10" to 20". 10/20 silica sand from 8" to 20". Hydrated bencentle chops from nurface to 9".       Image: Comments: 2" PVC well set at 20". PVC screen from 10" to 20". 10/20 silica sand from 8" to 20". Hydrated bencentle chops from nurface to 9".         Image: Comments: 2" PVC well set at 20". PVC screen from 10" to 20". 10/20 silica sand from 8" to 20". Hydrated bencentle chops from nurface to 9".       Image: Comments: 2" PVC well set at 20". Hydrated bencentle chops from nurface to 9".         Image: Comments: 2" PVC well set at 20". PVC screen from 10" to 20". 10/20 silica sand from 8" to 20". Hydrated bencentle chops from nurface to 9".       Image: Comments: 2" PVC well set at 20". Hydrated bencentle chops from nurface to 9".         Image: Comments: 2" PVC well set at 20". PVC well set at 20". PVC screen from 10" to 20". 10/20 silica sand from 8" to 20". Hydrated bencentle chops from nurface to 9".       Image: Comments: 2" PVC well set at 20". Hydrated bencentle chops from nurface to 9".         Image: Comments: 2" PVC well set at 20". PVC well set at 20". Hydrated bencentle chops from nurface to 9".       Image: Comments: 2" PVC well set at 20". Hydrated bencentle chops from nurface to 9".         Image: Comments: 2" PVC well set at 20". Hydrated bencentle chops from 9".       Image: Comments: 2" PVC well set at 20". Hydrated bencentle chops from 9".         Image: Comments: 2" PVC well set at 20". Hydrated bencentle chops from 9".       Image: Comments: 2".       Image: Comments: 2".         Image: Comments: 2" PVC well set at 20". Hydrated bencentle chops from 9".       Image: Comments: 2".       Image: Comments: 2".								-			DTW: 14	1.8'
Moist       0       SP       (0-16) SAND, moist, brown, poorly graded, fine grain, trace organics, no stain, no edor.       (0-16) SAND, moist, brown, poorly graded, fine grain, trace organics, no stain, no edor.         (01)       (01)       (0-16) SAND, moist, brown, no caliche gravel.       (0-16) SAND, moist, brown, no caliche gravel.         (01)       (01)       (01)       (01)       (01)         (01)       (01)       (01)       (01)       (01)         (01)       (01)       (01)       (01)       (01)         (01)       (01)       (01)       (01)       (01)       (01)         (01)       (01)       (01)       (01)       (01)       (01)       (01)         (01)	Well Co	nstruction				2" PVC well	set at 20'. P	VC scree	L en from 10' to 20'. 10/20 silica sand fr		s from	
Moist       0       SP       (0-16') SAND, moist, brown, poorty graded, fine grain, trace organics, no stain, no odor.       @4' Coarser sand grains and subround to subangular caliche gravel, trace sit, no organics.         @8' Color change to light brown, no caliche gravel.       @8' Color change to grayish-tan with dark reddish-brown motting, trace gravel.       @10' Some subround to subangular gravel.         @10' Some subround to subangular gravel.       @11' Color change to grayish-tan with dark reddish-brown motting, trace gravel.       @11' Color change to reddish-brown, moderately compacted, trace clay.       @12' Color change to light brown, noist, some thinly bedded laminations (<1mm), trace gravel.       @11' Color change to light brown, noist, some thinly bedded laminations (<1mm), trace gravel.       (16-17') CLAYEY SAND, moist, pink to light brown, poorty graded, very fine grain, low plasticity, cohesive, trace to few interbedded yellow-brown sand laminations, no stain, faint odor.       (17-18') SAND, wet, tan to light brown, poorty graded, very fine grain, low plasticity, cohesive, trace to few interbedded yellow-brown sand laminations, no stain, faint odor.       (17-18') SAND, wet, tan to light brown, no stain, faint odor.       (18-20') CLAYEY SAND, moist, pink to light brown, poorty graded, very fine grain, low plasticity, cohesive, trace to few interbedded yellow-brown sand laminations, no stain, faint odor.       (18-20') CLAYEY SAND, moist, pink to light brown, poorty graded, very fine grain, low plasticity, cohesive, trace to few interbedded yellow-brown sand laminations, no stain, faint odor.       (18-20') CLAYEY SAND, moist, pink to light brown, no stain, faint odor.         Weit       SC       SC       SC <th>Moisture Content</th> <th>Chloride (ppm)</th> <th>Vapor (ppm)</th> <th>Staining</th> <th>Sample ID</th> <th>Sample Depth (feet bgs)</th> <th>Depth (feet bgs)</th> <th>USCS/Rock Symbol</th> <th>Lithologic Des</th> <th>criptions/Notes</th> <th>Well Completion</th> <th></th>	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Des	criptions/Notes	Well Completion	
	Moist Wet		Ň				0 	SP SC SP	<ul> <li>organics, no stain, no odor.</li> <li>@4' Coarser sand grains and subrecaliche gravel, trace silt, no orgement of the gravel, trace silt, no orgement of the gravel, trace subround to subangular (a) 10' Some subround to subangular (a) 10.5' Color change to greyish-tar mottling, trace gravel.</li> <li>@11' Color change to reddish-brow trace clay.</li> <li>@12' Color change to light brown, no laminations (&lt;1mm), trace gravel</li> <li>(16-17') CLAYEY SAND, moist, pink very fine grain, low plasticity yellow-brown sand lamination (17-18') SAND, wet, tan to light brown trace small subround gravel.</li> <li>(18-20') CLAYEY SAND, moist, pink very fine grain, low plasticity yellow proven sand lamination trace small subround gravel.</li> </ul>	ound to subangular ganics. o caliche gravel. ar gravel. n with dark reddish-brown wn, moderately compacted, wn, moderately compacted, wn, moderately compacted, vn, tine grain, poorly graded, vn, fine grain, poorly graded, vn, cohesive, trace to few interbedded	2" PVC Well and Riser	Silica Sand (8-20') Hydrated Bentonite Chips(Surface-8')
		/					20		Total Depth			

Contract Number Name: North Brushy PW Line         Site Name: North Brushy PW Line         Incident Number: nAPP2231128594 & nAPP2312845934         Job Number: 18128         Coordinates: 32.054442, -103.942938         Coordinates: 32.054442, -103.942938         Coordinates: 32.054442, -103.942938         Hole Diameter: 6°       Total Depth: 53'         Comments: Boring was plugged with hydrated bentonite after a 72-hour observation period.         and group of the gro									Sample Name: BH15	Date: 3/27/2023
Incident Number: nAPP2231126594 & nAPP2312845934           LITHOLOGIC / SOIL SAMPLING LOG         Logged By: GM         Method: Sonic           Coordinates: 32.054442, -103.942938         Hole Diameter: 6"         Total Depth: 53'           Comments:Boring was plugged with hydrated bentonite after a 72-hour observation period.         Ithologic Descriptions/Notes           an tig by or of by or					<b>— — —</b>	_				Dato. 0/21/2020
Job Number: 18128           LITHOLOGIC / SOIL SAMPLING LOG         Logged By: GM         Method: Sonic           Coordinates: 32.054442103.942938         Hole Diameter: 6"         Total Depth: 53'           Comments:Boring was plugged with hydrated bentonite after a 72-hour observation period.         Item Diameter: 6"         Total Depth: 53'           Partial and the provided of the pr					$\sim$ L					4 & nAPP2312845934
Coordinates: 32.054442, -103.942938       Hole Diameter: 6"       Total Depth: 53'         Comments:Boring was plugged with hydrated bentonite after a 72-hour observation period.       Itihologic Descriptions/Notes         Image: Stress of the stress of th										
Coordinates: 32.054442, -103.942938       Hole Diameter: 6"       Total Depth: 53'         Comments:Boring was plugged with hydrated bentonite after a 72-hour observation period.       Itihologic Descriptions/Notes         am teging of the degree of the de		LITHOL	OGIC /	SOIL S	SAMPLING	LOG			Logged By: GM	Method: Sonic
Comments:Boring was plugged with hydrated bentonite after a 72-hour observation period.         an tig go (Line d)       b (Line d) <th>Coordina</th> <td>ates: 32.054442</td> <td>-103.94</td> <td>12938</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Coordina	ates: 32.054442	-103.94	12938						
Dry O (0-6') SAND, dry, brown, very fine to fine grain, poorly graded, trace organics, no stain, no odor. (23' Color change to slightly darker brown, no organics. (26' Some coarse sand, trace subround to subangular gravel, trace s (29' Abundant gravel. (11-18') CALICHE, dry, white-tan, well graded with silt very fine to fine grain, poorly consolidated, abundant small to large white subround to subangular caliche gravel, few small to large subround gravel, no stain, no odor. (18-21') CLAYEY SAND, dry, yellow orange-brown, poorly graded, very fine grain, low plasticity, cohesive, thinly interbedded reddish-brown clay laminations, no stain, no odor. (21-23') SAND, moist, tan-light brown, poorly graded, very fine to fine grain, no stain, no odor. (23-25') CLAYEY SAND, dry, yellow orange-brown, poorly graded, very fine grain, low plasticity, cohesive, no stain, no odor.					rated benton	nite afte	er a 72-	-hour ob		
Dry O (0-6') SAND, dry, brown, very fine to fine grain, poorly graded, trace organics, no stain, no odor. (23' Color change to slightly darker brown, no organics. (26' Some coarse sand, trace subround to subangular gravel, trace s (29' Abundant gravel. (11-18') CALICHE, dry, white-tan, well graded with silt very fine to fine grain, poorly consolidated, abundant small to large white subround to subangular caliche gravel, few small to large subround gravel, no stain, no odor. (18-21') CLAYEY SAND, dry, yellow orange-brown, poorly graded, very fine grain, low plasticity, cohesive, thinly interbedded reddish-brown clay laminations, no stain, no odor. (21-23') SAND, moist, tan-light brown, poorly graded, very fine to fine grain, no stain, no odor. (23-25') CLAYEY SAND, dry, yellow orange-brown, poorly graded, very fine grain, low plasticity, cohesive, no stain, no odor.	Moisture Content	Chloride (ppm) Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth	(feet bgs)	USCS/Rock Symbol	Lithologic Des	scriptions/Notes
Moist Dry	Dry		Sti	San			0	SP CCHE SC	trace organics, no stain, no o @3' Color change to slightly darke @6' Some coarse sand, trace subi @9' Abundant gravel. (11-18') CALICHE, dry, white-tan, v very fine to fine grain, poor small to large white subrou gravel, few small to large s (18-21') CLAYEY SAND, dry, yellow very fine grain, low plasticit reddish-brown clay laminat (21-23') SAND, moist, tan-light brow to fine grain, no stain, no o	dor. r brown, no organics. round to subangular gravel, trace silt. vell graded with silt ly consolidated, abundant ind to subangular caliche subround gravel, no stain, no odor. w orange-brown, poorly graded, ty, cohesive, thinly interbedded tions, no stain, no odor. wn, poorly graded, very fine dor. w orange-brown, poorly graded,

								Sample Name: BH15	Date: 3/27/2023			
						-		Site Name: North Brushy PW Line	Date: 0/21/2020			
		5			$\sim$ L			Incident Number: nAPP223112659	4 & nAPP2312845934			
								Job Number: 18128				
	11		GIC /	SOIL		LOG		Logged By: GM	Method: Sonic			
Coordina	ates: 32.0							Hole Diameter: 6"	Total Depth: 53'			
					rated bentoni	ite after a 72	2-hour ob	servation period.				
				-			-					
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Roc k Symbol	Lithologic Descriptions/Notes				
Moist					/_	25	SP	(25-26') SAND, moist, tan-light brow	vn,poorly graded, very fine to			
Dimi					/_	_		fine grain, no stain, no odor.				
Dry					/ -	-	SC	(26-27') CLAYEY SAND, dry, yellov	v orange-brown, poorly graded			
					/ -	<u> </u>	CL		y, cohesive, no stain, no odor.			
						Ľ						
					/ ]	Ļ		(27-38') CLAY, dry, tan-light brown,				
					/ -	30			an laminations (<1mm), few			
					/ -	F		yellow-orange sand laminat	ions (1-5cm), no stain, no odor.			
				/	/ _	-		@29' Few white crystalline gypsum	n inclusions(1-5cm).			
					-	-		@33' No gypsum inclusions.				
								(38-39') SAND, dry, tan to light brow fine grain, abundant thinly be (<1mm), trace silt, no stain, r	dded yellow sand laminations			
Dav					-	 - 	SP	(39-46') CLAY, dry, tan-grey, mediu platy, interbedded yellow-or no stain, no odor.	Im plasticity, cohesive, very ange sand laminations(1-2mm),			
Dry			/		_	-	58	@44' Color change to faint reddish	-brown with arey mottling.			
			1		-	40	CL					
					-	-		(46-47'), SAND, dry, white-tan, pool few to some thinly bedded to trace silt, no stain, no odor.				
					-		SP	(47-49') CLAYEY SAND, dry, light to fine grain, low plasticity, c laminations ( <1mm), no sta	ohesive, abundant thinly bedded tan			
						-	SC	(49-53') CLAY, dry, tan-light brown, cohesive, no stain, no odor.				
					-	-	CL	@52' Color change to reddish-brov	vn with tan sand inclusions, moist.			
	/					L						
	/					55	Total	 Denth				
							Total I	Depth				

.

								Sample Name: BH16	Date: 3/28/2023		
		$\Box$				1		Site Name: North Brushy PW Line	ļ		
		5		5	$\square$			Incident Number: nAPP223112659	4 & nAPP2312845934		
					$\mathbf{\mathcal{I}}$			Job Number: 18128			
	LITHO	LOGI	C / S	SOIL	SAMPLI	NG LOO	3	Logged By: GM	Method: Sonic		
Coordina	ates: 32.0	54442, -	103.94	12938				Hole Diameter: 4.75"	Total Depth: 16'	DT	N: 14.6'
Well Co surface		i Materia	ls/ Cor	nments:	: 2" PVC well	set at 16'. F	VC scree	n from 11' to 16'. 10/20 silica sand f	rom 8' to 16'. Hydrated bentonite ch	ips fro	m
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Des	criptions/Notes		Well Completion
Dry		-	1 1		<u> </u>	0	SP	(0-4') SAND, dry, light brown, poorl	y graded, very fine to fine grain,		
					/ ]	_		trace small subround gravel, r	no stain, no odor.		
Wet			/			- - - - - - - - - - - - - - - - - - -	SC	<ul> <li>@4' Color change to white-tan, sor abundant small to large subrout</li> <li>(10-11') CLAYEY SAND, dry, brown very fine to fine grain, low pl inclusions, no stain, no odor</li> <li>(11-12') SAND, dry, light brown, po- no stain, no odor.</li> <li>(12-13') CLAYEY SAND, dry, tan-re- fine to fine grain, low plastic</li> <li>(13-15') SAND, dry, tan-light brown grain, abundant small to large no stain, no odor.</li> <li>@14' Wet.</li> </ul>	nd gravel, trace silt. n-reddish brown, poorly graded, asticity, cohesive, few tan c orly graded, very fine to fine grain, eddish brown, poorly graded, very ity, cohesive, no stain, no odor. , poorly graded, fine to coarse		2" PVC Well and Riser Hydrated Bentonite Chips (surface-8')
Dry						- - - - - - - - - - - - - - - - - - -	SP SC SP	(15-16') CLAYEY SAND, dry, tan-re	eddish brown, poorly graded, very ity, cohesive, no stain, no odor.		Slotted Screen (11-16') Slotted Screen (10-20 Silica Sand (8-16')

								Sample Name: BH17	Date: 6/7/2023		
	(				_				Site Name: North Brushy PW Line	Date: 0/1/2023	
				F		1			Incident Number: nAPP2231126594	4 & nAPP2312845934	
	1								Job Number: 18128		
	11		GIC /	SOUR	AMPLING				Logged By: GM	Method: Sonic	
Coording	ates: 32.0					200			Hole Diameter: 6"	Total Depth: 50'	
						hloride <sup>-</sup>	Test S	Strins an	d PID for chloride and vapor, respect	-	
									Boring was immediately plugged usin		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth	(feet bgs)	USCS/Rock Symbol	Lithologic Des	criptions/Notes	
Dry	3,744	0.1	No	BH17	0.5		)	SP	(0-7') SAND, dry, dark brown, poorly	y graded, very fine	
					_	L			to fine grain, trace silt, no stai	n, no odor.	
					-	L			@4' Color obongo to brown		
					-				@4' Color change to brown.		
Dry	200	0.1	No	BH17	4 - 	- - - 5	5		(7-10') CALICHE, dry, tan, well graded with silt, fine to coarse grain, moderate consolidation, abundant small multi colored subround to subangular gravel (1-3mm), no stain, no odor.		
					- - -	-  -		CCHE	(10-13') SAND, dry, light brown, poo grain, abundant small to lar (1-3mm), trace silt, no stain	ge subround to subangular gravel	
Dry	<168	1.3	No	BH17	9 _				@12' Color change to tan-light brow	<i>w</i> n, fine grain.	
Dry	2,252.0	0.1			10	- 1 -	0	SP		brown, poorly graded, very fine to ohesive, yellow-orange mottling, ons (3cm), no stain, no odor.	
Dry	6,064.0	0.3			12						
Dry	3,744	0	No	BH17		-		SC	(14-15') SAND, dry, tan, poorly grad no stain, no odor.	led, very fine to fine, trace silt,	
Diy	5,744	0	110		<sup>'+</sup>	┢	ŀ	SP	(15-16') CLAYEY SAND, dry, light b	prown, poorly graded, very fine to	
					-	1	5			phesive, yellow-orange mottling,	
							ľ	SC	thinly bedded clay laminati	ons (3cm), no stain, no odor.	
Wet	6,064	0.2	No		16	L					
141.4	040	0.4	N		47	L		SP	(16-17') SAND, wet, tan-light brown		
Wet	912	0.1	No		17	-	ŀ	SC	some slit, trace large subro	ound gravel, no stain, no odor.	
Wet	3,744	0.1	No	BH17	18	- ,	0	SP		brown, poorly graded, very fine to bhesive, yellow-orange mottling, ons (3cm), no stain, no odor.	
					-	F 1					
Dry	5,592	0	No		22				@17.5' Color change to yellow-oran brown interbedded lamination		
						Ĺ	Ī	SC			
	0.050	0.0			-	Ļ			(18-22') SAND, wet, light brown, poo	orly graded, very fine to fine grain,	
Dry	2,056	0.2	No	BH17	24	<b> </b> -	ŀ	SP	no stain, no odor.		
					-	2	5	37			

Interpretation       Single control         LITHOLOGIC / SOIL SAMPLING LOG       Loc         Coordinates: 32.054442, -103.942938       H         Comments: Field screening conducted with HACH Chloride Test Strips and F         dilution factor of soil to distilled water. No correction factors included. Boring         Interpretation       Songer control         Interpretation       Songer control       Songer control       Songer control         Interpretation       Songer control       Songer control       Songer control         Moist       1,968       O       No	Sample Name: BH17 Date: 6/7/2023
LITHOLOGIC / SOIL SAMPLING LOG         Lit           Coordinates: 32.054442, -103.942938         H           Comments: Field screening conducted with HACH Chloride Test Strips and F         Gillution factor of soil to distilled water. No correction factors included. Boring           any tuging of the conductor of soil to distilled water. No correction factors included. Boring         any tuging of the conductor of soil to distilled water. No correction factors included. Boring           any tuging of the conductor of soil to distilled water. No correction factors included. Boring         any tuging of the conductor of soil to distilled water. No correction factors included. Boring           Moist         552         0.2         No         26         -         (2           Moist         1,968         0         No         BH17         30         30         SC           Moist         1,968         0         No         BH17         30         -         35         (3)           Moist         1,968         0         No         BH17         36         -         (2)           Moist         4,400         0.1         No         BH17         36         -         (3)           Dry         452         0         No         BH17         40         -         40         SP         (4)           <	Site Name: North Brushy PW Line
LITHOLOGIC / SOIL SAMPLING LOG       Lit         Coordinates: 32.054442, -103.942938       H         Comments: Field screening conducted with HACH Chloride Test Strips and F         dilution factor of soil to distilled water. No correction factors included. Boring         any transport         any transport         Moist       552       0.2         Noist       1,968       0       No         BH17       30       30         SC       SP       (3)         Moist       4,400       0.1       No         Dry       200       0       No       BH17         Dry         0       No       BH17         Jord       43       -       CL       (4)	Incident Number: nAPP2231126594 & nAPP2312845934
Coordinates: 32.054442, -103.942938         Comments: Field screening conducted with HACH Chloride Test Strips and F         dilution factor of soil to distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         any sign of the distilled water. No correction factors included. Boring         Moist       1,968         1,968       0         No       BH17         30       SC         SP       (3)         any sign of the distilled water. No correction factors included.         Moist       1,968         0       No         BH17       36	Job Number: 18128
Comments: Field screening conducted with HACH Chloride Test Strips and F         dilution factor of soil to distilled water. No correction factors included. Boring         an transmit       an transmit         an transmit       an transmit         Moist       552       0.2       No       25       SAA       (a)         Moist       1,968       0       No       BH17       30       30       SC         Moist       4,400       0.1       No       BH17       36       35       (a)         Dry       452       0       No       BH17       36       CL       (a)         Dry       <1068       0       No       BH17       36       CL       (a)         Dry       <1088       0       No       BH17       36       (a)       (a)         Dry       <200       0       No       BH17       36       (a)       (a)         Dry       <168       0       No       BH17       40       40       SP       (a)         Dry       <168       0       No       BH17       43       (b)       CL       (c)	Logged By: GM Method: Sonic
dilution factor of soil to distilled water. No correction factors included. Boring         annisition       image: solution of soil to distilled water. No correction factors included. Boring         Moist       552       0.2       No       25       SAA       (c)         Moist       1,968       0       No       BH17       30       30       (c)         Moist       1,968       0       No       BH17       30       30       (c)         Moist       1,968       0       No       BH17       30       30       (c)         Moist       1,968       0       No       BH17       30       40       (c)         Dry       452       0       No       BH17       38       (c)       (c)         Dry       200       0       No       BH17       40       40       SP       (d)         Dry       <168	Hole Diameter: 6" Total Depth: 50'
Moist         552         0.2         No         BH17         26         25         SAA         (2)           Moist         1,968         0         No         BH17         30         30         (2)           Moist         1,968         0         No         BH17         30         30         (2)           Moist         1,968         0         No         BH17         30         30         (2)           Moist         4,400         0.1         No         BH17         36         (3)         (3)           Dry         452         0         No         BH17         38         (3)         (4)           Dry         200         0         No         BH17         40         40         (4)           Dry         <168	
Moist       552       0.2       No       26       1 <td< th=""><th>Lithologic Descriptions/Notes</th></td<>	Lithologic Descriptions/Notes
	<ul> <li>@21' Some coarser sand grains, abundant small to large subround gravel (1-5mm).</li> <li>(22-24') CLAYEY SAND, moist, light brown, poorly graded, very fine grain, low plasticity, cohesive, yellow-orange mottling, thinly bedded clay laminations (1mm), no stain, no odor.</li> <li>(24-30) SAND, moist, light brown, poorly graded, very fine to fine grain, some silt, some small to large subround gravel, no stain, no odor.</li> <li>(30-31') CLAYEY SAND, moist, light brown-reddish brown, poorly graded, very fine grain, low plasticity, cohesive, yellow-orange mottling, no stain, no odor.</li> <li>(31-38') SAND, moist, light brown to brown, poorly graded, some silt, no stain, no odor.</li> <li>(31-38') SAND, moist, light brown-brown, medium plasticity, cohesive, some yellow-orange mottling.</li> <li>(38-40') CLAY, dry, light brown-brown, medium plasticity, cohesive, some yellow-orange mottling, no stain, no odor.</li> <li>(40-43') SAND, dry, brown, poorly graded, fine grain, trace silt, no stain, no odor.</li> <li>(43-50') CLAY, dry, reddish brown-brown, medium plasticity, cohesive, no stain, no odor.</li> <li>(43-50') CLAY, dry, reddish brown-brown, medium plasticity, cohesive, no stain, no odor.</li> <li>(45' Grey mottling with interbedded sand laminations.</li> </ul>
Dry <168 0 No BH17 50 50	al Depth



.

								Sample Name: BH19	Date: 6/8/2023	
		$\Box$						Site Name: North Brushy PW Line	Bate. 0/0/2020	
		5			$\sim$ U			Incident Number: nAPP223112659	4 & nAPP2312845934	
								Job Number: 18128		
ТІТ			:/ \$		SAMPL			Logged By: GM	Method: Sonic	
	ates: 32.0							Hole Diameter: 6"	Total Depth: 31'	DTW:22.3'
					2" PVC well	set at 31'	PVC scre		rom 19' to 31'. Hydrated bentonite chi	1
surface t									·	-
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Roc k Symbol		criptions/Notes	Well Completion
Dry			I			0	SP	(0-7') SAND, dry, dark brown, poorl	y graded, very fine to fine	
						_		grain, some organics, trace si	lt and clay, no stain, no odor.	
					+	-		@3' No organics.		
						- 5 - 5 	ССНЕ	trace grey clay laminations (< (17-18') SAND, dry, tan to light brow some yellow-orange mottling (18-19') CLAY, dry, grey, medium p yellow-orange sand laminatio yellow-orange to reddish mott	nt small to large subround to no odor. prown, poorly graded, very fine to ling, low plasticity, cohesive, 1mm), no stain, no odor. wn, poorly graded, very fine grain, g, no stain, no odor. lasticity, cohesive, trace uns(<1mm), trace organics, some ling, no stain, no odor.	I I I I I I I I I I I I I I I I I I I
						- - - - - - - - - - - - - - - - -	SC SP CL	interbedded reddish-grey clay no odor. (20-21') SAND, moist, light brown, p some yellow-orange mottlin (21-23') CLAY, moist, light brown-re	esive, yellow-orange mottling, some y laminations (1mm-1cm), no stain, boorly graded, very fine to fine grain, ig, no stain, no odor. eddish brown, medium plasticity, ions (<1mm), some sand laminations mottling, no stain, no odor. ded, very fine to fine grain,	2" PVC We
Moist					- - -		SP			-



1									Sample Name: BH20	Date: 7/25/2023				
		$\Box$							Site Name: North Brushy PW Line					
		5							Incident Number: nAPP2231126594	4 & nAPP2312845934				
									Job Number: 18128					
	Lľ	THOLO	GIC /	SOIL S	AMPLING	LOG	i		Logged By: GM	Method: Sonic				
Coordina	ates: 32.0	54442, -	103.94	42938					Hole Diameter: 6"	Total Depth: 103'				
Commer	nts:Boring	g was plu	igged	using hy	drated bento	onite a	fter a	_	bservation period.					
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth	(feet bgs)	USCS/Rock Symbol						
Dry			• • •				0	SP	<ul> <li>(0-12') SAND, dry, brown, poorly gratering trace silt, no stain, no odor.</li> <li>@6' Color change to tan-light brow subround gravel, trace lamination</li> </ul>	n, trace coarse to small				
						+ + +	5		@10' Trace interbedded reddish-br some white crsytalline gymps	rown clay laminations(1-5mm),				
					/    -  -		10		gypsum inclusions, interbed	m), abundant white crystalline				
					-		15	CL SC	(14-18') CLAYEY SAND, dry, light t fine grain, low plasticity, col inclusions, no stain, no odor	nesive, trace white crytalline gypsum				
					-			CL	(18-20') CLAY, dry, reddish-brown, abundant laminations (1-3mi inclusions, abundant interbe no stain, no odor.					
			/		- - - -	+ + +	20	SC SP		in, low plasticity, cohesive, trace usions, some interbedded reddish-				
		/			-		25	CL	(22-24') SAND, dry, tan, poorly grac yellow-orange mottling, no					
		T					30	SP SC	<ul> <li>@ 23' Fine grain.</li> <li>(24-28') CLAY, dry, reddish brown-occohesive, white crystalline glaminations (&lt;1mm), some laminations (1mm), no stain</li> </ul>	gypsum inclusions, abundant interbedded tan sand				
	/				-	+		SP	@ 26' Color change to tan with yell	low-orange mottling.				

								Sample Name: BH20	Date: 7/25/2023			
					<u> </u>			Site Name: North Brushy PW Line	Dato. I/LO/LOLO			
					$\sim$ L			Incident Number: nAPP2231126594	4 & nAPP2312845934			
								Job Number: 18128				
	LIT	HOLO	GIC /	SOIL S	AMPLING	LOG		Logged By: GM	Method: Sonic			
Coordina	ates: 32.05	54442, -	103.94	42938				Hole Diameter: 6"	Total Depth: 103'			
					/drated bent	onite after a	72-hour d	bbservation period.				
	-											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Des	criptions/Notes			
Dry					/_	L	SC	(28-30') SAND, dry, tan, poorly grad	led, very fine to fine grain,			
					/⊢	35		trace interbedded brown cla	,			
					/  -	ł	CL	trace silt, no stain, no odor.				
					/	F		(30-33') CLAYEY SAND dry tan-lic	ht brown poorly graded very			
					-	t		(30-33') CLAYEY SAND, dry, tan-light brown, poorly graded, very fine to fine, low plasticity, cohesive, some yellow-orange				
					/	F			psum inclusions, no stain, no odor.			
					/ [	40						
					/  .	Ļ		@31' Color change to tan with abu				
					/	F		interbedded tan-light brown o	clay laminations (1-3 mm).			
					-	t.	SP	(33-34') SAND, dry, tan, poorly grad	led yory fine to fine grain			
					-	$\vdash$	55	no stain, no odor.	ieu, very nne to nne grain,			
					-	45						
					-		CL	(34-35') CLAYEY SAND, dry, tan-lig	ht brown, poorly graded, fine			
						Ĺ		grain, low plasticity, cohesiv	e, yellow-orange mottling, trace			
				/	-	F		interbedded clay laminations	s (1-3mm), no stain, no odor.			
				/		L.	SC					
					-	- <sub>50</sub>		(35-43') CLAY, dry, tan-light brown,				
					-	50		sand laminations (< 1mr	m), abundant yellow-orange silty			
			/		-	t						
			/			F	CL	@37' Abundant silt.				
			1		-	Ĺ						
		/			Γ	L_		@40' Color change to grey-tan with	yellow-orange and reddish-			
		/			Ļ	55		pink mottling.				
		/			-	ł			lad your find to find and			
		/			┝	┢		(43-45') SAND, dry, tan, poorly grad some yellow-orange laminati				
		/			-	t		gypsum inclusions, trace silt,				
		/			⊢	F			,,			
	/				-	60		(45-47') CLAY, dry, grey-tan, mediu	m plasticity, cohesive,			
	/				Γ.	Γ		abundant laminations (<1mm	n), some interbedded yellow-			
	/					F		· · ·	2mm), white crystalline gypsum			
	/				-	ł	CL	inclusions, no stain, no odor.				
	/				⊢	┢		(17-51) OLAVEN CAND day light a	eddish-brown poorly graded fine			
	/				-	65		(47-51') CLAYEY SAND, dry, light re grain, low plasticity, cohesive				
	/					$\uparrow$			ite crystalline gypsum inclusions,			
	/				-	†		no stain, no odor.	, ,,			

									Sample Name: BH20	Date: 7/25/2023				
						_			Site Name: North Brushy PW Line	240. 1/20/2020				
		5			$\sim$ L				Incident Number: nAPP223112659	4 & nAPP2312845934				
	4								Job Number: 18128					
	Lľ	THOLO	GIC /	SOIL S	SAMPLING	LO	G		Logged By: GM	Method: Sonic				
Coordina	ates: 32.0	54442, -	103.94	42938					Hole Diameter: 6"	Total Depth: 103'				
Comme	nts: Borin	g was plu	ugged	using hy	drated bent	tonite	after a	72-hour	observation period.					
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	4	(feet bgs)	USCS/Rock Symbol						
Dry			σ 	Sa			70 75 80 85 90	SP Gyp CL	to brown sand laminations ( gypsum inclusions (1-10mn @55' Abundant grey mottling, incre- sand laminations (1-2mm). @56', Decreased size of interbedd (62-67') CLAY, dry, light grey-grey, abundant laminations (<1m crystalline gypsum inlusions (67-68') GYPSUM, dry, light grey-gr features, moderate consolic (68-72') SAND, dry, light brown, po- fine grain, trace silt, no stair (72-103') CLAY, dry, light grey-grey abundant laminations (<1m	m), some interbedded yellow-orange <1mm), large white crystalline n), no stain, no odor. eased size of interbedded brown ed brown sand laminations (1mm). medium plasticity, cohesive, m), some darker grey mottling, white s, no stain, no odor. rey, large platy like crystalline lation, no stain, no odor. orly graded, very fine to n, no odor. r, medium plasticity, cohesive, m), some interbedded dark grey ons (1-2 mm), trace interbedded s (1mm), no stain, no odor. crystalline gypsum usions (1-2cm). at, decreased consolidation. increased consolidation.				
					-		100		<ul> <li>@92' Increased plasticity and cohe</li> <li>@102' Grey anhydrite boulder, mo conchoidal-like fracturing.</li> </ul>					
								Total	-					

	a								Sample Name: BH21 Date: 7/27/2023	
									Site Name: North Brushy PW Line	
		5							Incident Number: nAPP2231126594 & nAPP2312845934	
		-							Job Number: 18128	
ТІТ	HOI	OGIC	:/ \$	SOIL	SAMPL	ING			Logged By: GM Method: Sonic	
	ates: 32.0							•	Hole Diameter: 6" Total Depth: 39'	DTW:15.44'
					Field screeni	ina cond	ucted wi	th H	ACH Chloride Test Strips and PID for chloride and vapor, respectively.	
performe	ed with 1:	4 dilution	facto	or of soil t		ter. No c			ctors included. 2" PVC well set at 25'. PVC screen from 15' to 25'. 10/20	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bas)		k Symbol	Lithologic Descriptions/Notes	Well Completion
Dry	5,384	0	No	BH21	0.5	0	S	Ρ	(0-5') SAND, dry, brown, poorly graded, fine grain, no stain, no odor.	-
Diy	0,004	0		DITE	-	 -  -			(5-7') CALICHE, dry, tan, well graded, very fine to coarse grain, abundabt small to large subround to subangular gravel, no stain, no odor.	
Dry	8,644	0	No	BH21	5	- 5 	CC S		(7-23') SAND, dry, tan-light brown, poorly graded, very fine to fine grain, no stain, no odor.	2 PVC Well and Riser Hydrated Bentonite Chips (surface-13)
					-	_ - -			@10' Moist, some silt, some yellow-orange laminations (1mm).	PVC Well ar
Dry	6,832	0	No	BH21		10 			@17-18' Some coarser sand grains, abundant small to large subround gravel.	
Moist	480	0	No		13	- - - -			@19' Wet, some silt.	
Moist	<168	0	No	BH21	15	- 			(23-25') CLAYEY SAND, dry, tan to light brown, poorly graded, very fine grain, low plasticity, cohesive, yellow-orange mottling, no stain, no odor.	25')
Moist	1,744	0	No	BH21	18	- 				
Wet	1,416	0	No		19	-				- Slotted
Wet	396	0	No		19.5					-

							Sample Name: BH21	Date: 7/27/2023	
					1		Site Name: North Brushy PW Line		
	$\mathbf{\nabla}$						Incident Number: nAPP2231126594	4 & nAPP2312845934	
							Job Number: 18128		
LITHO	LOGIC	:/ 5	SOIL	SAMPL	ING L	OG	Logged By: GM	Method: Sonic	
Coordinates: 32							Hole Diameter: 6"	Total Depth: 39'	DTW:15.44'
	1:4 dilution	n facto	r of soil t	o distilled wat	ter. No corre		ACH Chloride Test Strips and PID fo tors included. 2" PVC well set at 25'.		
Moisture Content Chloride (nnm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Roc k Symbol	Lithologic Des	criptions/Notes	Well Completion
Moist <168	0	No	BH21	20	20	SP	(25.20) SAND dry top light brown	poorly graded your fina	
Dry 356	0	No		21	_		(25-29') SAND, dry, tan-light brown, to fine grain, trace silt, no stain		1 15-25
Dry <168	0	No		22	-	SC			- Screer
Dry <168	0	No	BH21	23	-	50	@29' Color change to light brown, some small to large subround to	•	Slotted Screen (15-25)
Dry 168	0	No	BH21	29	25 25 30	SP SC SP	(29-30') CLAYEY SAND, dry, yellow fine to fine grain, low plasticity, mottling, no stain, no odor. (30-32') SAND, moist, yellow-orange reddish brown-brown mottling, t laminations (1-2cm), trace silt, r	cohesive, light brown e, poorly graded, fine grain, trace interbedded grey clay	10-20 Silica Sand (13-39')
Dry <168	0	No	BH21	39	- - - - -	SC	(32-39') CLAYEY SAND, dry, light b grain, low plasticity, cohesive, y laminations, some interbedded no stain, no odor.	ellow-orange mottling and	
			51121				Total Depth		





# APPENDIX D

# Photographic Log

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Photograph 11Date: 07/25/2023Description: Southeastern view during drilling<br/>activities of BH20.

Photograph 12Date: 07/27/2023Description: Southeastern view during drilling<br/>activities of BH22..

## APPENDIX E

# Tables

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



-

<b>G</b> TE(	CH			WPX Ene North E	Table 1 ANALYTICAL RES orgy Permian, LLC Brushy PW Line unty, 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 Closur Release (NMAC 19.15.2		s Impacted by a	10	50	NE	NE	NE	100	600
			Delineation Se	oil Samples Analytical	Results - nAPP223112	6594 & nAPP23128459	34	•	
SS01	01/25/2023	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	5.76
SS02	01/25/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<4.99
SS03	01/25/2023	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<4.95
SS04	01/25/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<4.95
SS05	01/25/2023	0.5	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<4.97
SS06	01/25/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	72.5
SS07	01/25/2023	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<4.96
SS08	01/25/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	160
SS09	01/25/2023	0.5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	25.5
SS10	01/25/2023	0.5	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	18.0
BH01	01/25/2023	0.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	274
BH01	01/25/2023	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	10,800
PH03	02/07/2023	12	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	4,010
BH12	02/16/2023	12	<0.00200	<0.00400	<49.9	129	<49.9	129	3,060
BH12	02/16/2023	15	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	7,490
BH12	02/16/2023	20	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	4,560
BH12	02/16/2023	26	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	348
BH02	01/25/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	13,100
BH02	01/25/2023	4	<0.00201	<0.00402	<49.9	68.3	<49.9	68.3	255
BH03	01/25/2023	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	1,760
BH03	01/25/2023	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	6,870
BH04	01/25/2023	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	7,510
BH04	01/25/2023	4	<0.00199	<0.00398	<50.0	64.0	<50.0	64.0	2,490
BH05	01/25/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	8,530
BH05	01/25/2023	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	8,900
BH06	01/25/2023	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	8,570
BH06	01/25/2023	4	<0.00200	<0.00399	<49.9	98.6	<49.9	98.6	4,490

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<b>C</b> TE(	CH			WPX Ene North E	Table 1 ANALYTICAL RES orgy Permian, LLC Brushy PW Line unty, 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 Closur Release (NMAC 19.15.2		s Impacted by a	10	50	NE	NE	NE	100	600
BH07	01/25/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	4,810
BH07	01/25/2023	4	<0.00199	<0.00398	<49.9	577	<49.9	577	2,780
BH08	01/25/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	7,070
PH02	02/07/2023	5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	4,930
PH02	02/07/2023	10	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	5,590
BH09	01/25/2023	0.5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	8,660
PH01	02/07/2023	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	4,720
PH01	02/07/2023	12	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	6,400
BH13	02/16/2023	13	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	7,570
BH13	02/16/2023	17	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	2,610
BH13	02/16/2023	22	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	4,590
BH13	02/16/2023	25	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	2,060
BH13	02/16/2023	30	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	2,250
BH10	02/16/2023	5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	11,800
BH10	02/16/2023	9	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	8,280
BH10	02/16/2023	15	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	642
BH10	02/16/2023	20	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	521
BH11	02/16/2023	5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	7,690
BH11	02/16/2023	10	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	4,240
BH11	02/16/2023	18	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	2,210
BH11	02/16/2023	21	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	290
BH11	02/16/2023	25	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	37.1
BH11	02/16/2023	29	<0.00200	0.0262	<49.9	<49.9	<49.9	<49.9	374

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<b>G</b> TE(	CH			WPX Ene North E	Table 1 ANALYTICAL RES orgy Permian, LLC Brushy PW Line unty, 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 Release (NMAC 19.15.2		s Impacted by a	10	50	NE	NE	NE	100	600
BH17	06/07/2023	0.5	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	3,750
BH17	06/07/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<20.0
BH17	06/07/2023	9	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	92.0
BH17	06/07/2023	14	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	3,620
BH17	06/07/2023	18	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	2,880
BH17	06/07/2023	24	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	3,530
BH17	06/07/2023	30	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	4,600
BH17	06/07/2023	38	<0.0250	<0.250	<20.0	<25.0	<50.0	<50.0	257
BH17	06/07/2023	40	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	445
BH17	06/07/2023	50	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	35.9
BH21	07/28/2023	0.5	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	4,990
BH21	07/28/2023	5	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	7,360
BH21	07/28/2023	10	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	3,360
BH21	07/28/2023	15	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	73.5
BH21	07/28/2023	18	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	2,620
BH21	07/28/2023	20	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	261
BH21	07/28/2023	23	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	30.3
BH21	07/28/2023	29	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	28.3
BH21	07/28/2023	39	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	26.9

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

Text in ""grey"" represents excavated soil samples

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria and/or Reclamation Standard<sup>†</sup> for Soils Impacted by a Release

<sup>†</sup> The reclamation concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.

eteci	H							W		<sup>,</sup> Permiar shy PW I	Line	TS										
Sample I.D.	Sample Date	5181108	d we may 2328.	Jonate As Calob	Insteins CaCOR	ota Arainity Cato	n boxde, free	thor Districts	e Anion Balance	Dissolved Solit	ANB HOLDONS	Critoria	Sulase Millo	Ser. Hurses H	gen. Hurte 25	PA 200, T MERSIE	Calcium	POT	Wandanese	Wageagun	Potessium	Solum
Unit			mg/L	mg/L	mg/L	mg/L	mg/L	%	mg/L		mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
NMWQCC Stan	dard	1	NE	NE	NE	NE	NE	NE	1,000.0		250.0	600.0	NE	NE		NE	1.0	0.2	NE	NE	NE	
BH13	08/28/2023		191	<4.00	191	48.0	216	7.74	27,400		13,400	266	11.9	<1.00		2,930	1.16	0.266	429	73.5	6,300	1
BH13	03/26/2024		186	<4.00	186	58.9	222	-2.91	16,400		8,040	191	14.5	<1.00		1,640	<10.0	<1.00	271	32.5	2,770	
BH14	08/28/2023		219	<4.00	219	43.7	236	6.48	13,200		5,750	181	18.8	3.80		1,720	4.36	0.533	149	51.6	2,290	
BH18	08/28/2023		305	<4.00	305	9.61	277	-9.37	635		80.3	54.2	16.6	1.60		98.5	<0.200	0.0255	8.36	2.26	119	
BH19	08/28/2023		363	<4.00	363	22.9	342	-5.63	1,770		178	554	5.60	0.613		194	<0.200	<0.0200	61.8	1.71	238	
BH19	03/26/2024		4,440	<4.00	4,400	554	4,420	-35.6	2,330		251	915	6.56	<0.100		740	10.7	1.11	87.5	<25.0	298	1
BH21	08/28/2023		189	<4.00	189	30.0	197	13.9	11,200		3,690	334	20.9	<0.100		1,650	<0.200	0.0961	288	7.68	1,180	
BH21	03/26/2024		166	<4.00	166	41.8	188	2.74	14,300		4,980	346	16.5	<1.00		1,700	<10.0	<1.00	301	<25.0	1,240	4
BH22	08/28/2023		281	<4.00	281	8.86	255	-0.0532	1,220		334	43.1	21.1	1.35		115	<0.200	0.0248	10.2	4.47	295	
BH22	03/26/2024		256	<4.00	256	25.6	251	41.7	1,800		422	35.3	18.0	<0.100		920	18.6	<1.00	26.0	<25.0	253	

Notes: --- not analyzed mg/L - milligrams per liter NE: Not Established SM: Standard Method USEPA- United States Environmental Protection Agency NMAC: New Mexico Administrative Code NMMQCC: New Mexico Water Quality Control Comission Concentrations in **bold** exceed the NMWQCC Standards, 20.6.2 of the NMAC. Page 62 of 540

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# APPENDIX F

Laboratory Analytical Reports & Chain-of-Custody Documentation

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



Received by OCD: 4/15/2024 2:04:17 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

### PREPARED FOR

Attn: Devon Team Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 2/10/2023 11:59:31 AM

### JOB DESCRIPTION

North Brushy PW Line SDG NUMBER 03A1987062

### **JOB NUMBER**

890-3965-1

Page 1 of 34

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220 Page 64 of 540

Received by OCD: 4/15/2024 2:04:17 PM

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### **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

RAMER

Generated 2/10/2023 11:59:31 AM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

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			540
	Definitions/Glossary		
Client: Ensolum		Job ID: 890-3965-1	
Project/Site: No	rth Brushy PW Line	SDG: 03A1987062	
Qualifiers			
GC VOA			
Qualifier	Qualifier Description		
S1-	Surrogate recovery exceeds control limits, low biased.		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
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		4
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)		

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Detected at the reporting limit (or MDL or EDL if shown)

Not Calculated

Negative / Absent

Positive / Present

Presumptive

Quality Control

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

MDL

ML

MPN

MQL

NC

ND NEG

POS

PQL

PRES

QC

RER

RPD

TEF

TEQ TNTC

RL

#### Job ID: 890-3965-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-3965-1

#### Receipt

The samples were received on 1/26/2023 2:33 PM. 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 1.0°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3965-1), SS02 (890-3965-2), SS03 (890-3965-3), SS04 (890-3965-4), SS05 (890-3965-5), SS06 (890-3965-6), SS07 (890-3965-7), SS08 (890-3965-8), SS09 (890-3965-9) and SS10 (890-3965-10).

#### GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-45550/5-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-45763 and analytical batch 880-45729 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-45086 and analytical batch 880-45245 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-45084 and 880-45084 and analytical batch 880-45244 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

RL

MDL Unit

D

Prepared

Job ID: 890-3965-1 SDG: 03A1987062

### **Client Sample ID: SS01**

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 09:00

Client: Ensolum

Analyte

Lab Sample ID: 890-3965-1

Analyzed

Matrix: Solid

5 Dil Fac

12 13

Date Received: 01/26/23 14:33 Sample Depth: 0.5'

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

Result Qualifier

Analyte	Result	Quaimer	RL	WDL	Unit	U	Prepared	Analyzed	DIFac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 17:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 17:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 17:43	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/06/23 08:20	02/06/23 17:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 17:43	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/06/23 08:20	02/06/23 17:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				02/06/23 08:20	02/06/23 17:43	1
1,4-Difluorobenzene (Surr)	91		70 - 130				02/06/23 08:20	02/06/23 17:43	1
Method: TAL SOP Total BTEX -	Total BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/07/23 09:28	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/09/23 09:45	1
Method: SW846 8015B NM - Die	sol Pango Orga	nice (DPO)	(60)						
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		02/08/23 10:22	02/08/23 23:52	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		02/08/23 10:22	02/08/23 23:52	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/08/23 10:22	02/08/23 23:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130				02/08/23 10:22	02/08/23 23:52	1
o-Terphenyl	95		70 - 130				02/08/23 10:22	02/08/23 23:52	1
Method: EPA 300.0 - Anions, Ior	Chromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.76		5.02		mg/Kg			02/02/23 14:27	1
lient Sample ID: SS02							Lab Sar	nple ID: 890-	3965-2
ate Collected: 01/25/23 09:10								Matri	ix: Solid
ate Received: 01/26/23 14:33									
ample Depth: 0.5'									
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)							
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 18:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 18:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 18:10	1
							· · · · · · · · · · · · · · · · · · ·		

m-Xylene & p-Xylene <0.00399 U 0.00399 mg/Kg 02/06/23 08:20 02/06/23 18:10 1 o-Xylene <0.00200 U 0.00200 02/06/23 08:20 02/06/23 18:10 mg/Kg 1 Xylenes, Total <0.00399 U 0.00399 02/06/23 08:20 02/06/23 18:10 mg/Kg 1 Qualifier Limits Prepared Dil Fac Surrogate %Recovery Analyzed 4-Bromofluorobenzene (Surr) 98 70 - 130 02/06/23 08:20 02/06/23 18:10 1

**Eurofins Carlsbad** 

Released to Imaging: 2/17/2025 2:02:20 PM

### **Client Sample Results**

Job ID: 890-3965-1 SDG: 03A1987062

Matrix: Solid

Lab Sample ID: 890-3965-2

### Client Sample ID: SS02

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 09:10 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

25/25 09.10			
26/23 14:33			

#### Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued) %Recovery Qualifier Limits Prepared Surrogate Analyzed Dil Fac 70 - 130 02/06/23 08:20 1,4-Difluorobenzene (Surr) 92 02/06/23 18:10 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL MDL Unit D Analyzed Dil Fac Prepared Total BTEX < 0.00399 Ū 0.00399 02/07/23 09:28 mg/Kg Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Total TPH <49.9 Ū 49.9 02/10/23 10:33 mg/Kg Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) MDL Unit Analyte **Result Qualifier** RL D Prepared Analyzed Dil Fac <49.9 U mg/Kg Gasoline Range Organics 49.9 02/07/23 09:21 02/10/23 05:11 (GRO)-C6-C10 <49.9 U 49.9 02/07/23 09:21 02/10/23 05:11 **Diesel Range Organics (Over** mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <49.9 U 49.9 mg/Kg 02/07/23 09:21 02/10/23 05:11 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 83 70 - 130 02/07/23 09:21 02/10/23 05:11 89 70 - 130 02/07/23 09:21 02/10/23 05:11 o-Terphenyl 1 Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Chloride <4.99 U 4.99 02/02/23 14:33 mg/Kg 1 Lab Sample ID: 890-3965-3 **Client Sample ID: SS03**

Date Collected: 01/25/23 09:20 Date Received: 01/26/23 14:33 Sample Depth: 0.5'

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 02/06/23 08:20 02/06/23 18:36 Toluene <0.00199 U 0 00199 02/06/23 08:20 02/06/23 18:36 mg/Kg 1 Ethylbenzene <0.00199 U 0.00199 02/06/23 08:20 02/06/23 18:36 mg/Kg 02/06/23 18:36 m-Xylene & p-Xylene <0.00398 U 0.00398 02/06/23 08:20 mg/Kg o-Xylene <0.00199 U 0.00199 mg/Kg 02/06/23 08:20 02/06/23 18:36 Xylenes, Total <0.00398 U 0.00398 mg/Kg 02/06/23 08:20 02/06/23 18:36 1 %Recovery Qualifier Limits Dil Fac Surrogate Prepared Analvzed 70 - 1304-Bromofluorobenzene (Surr) 96 02/06/23 08:20 02/06/23 18:36 1 1,4-Difluorobenzene (Surr) 96 70 - 130 02/06/23 08:20 02/06/23 18:36 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analvte Result Qualifier RL MDL D Dil Fac Unit Prepared Analyzed Total BTEX <0.00398 Ū 0.00398 02/07/23 09:28 mg/Kg Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac <49.8 U Total TPH 49.8 02/10/23 10:33 mg/Kg 1

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Matrix: Solid

5

Job ID: 890-3965-1 SDG: 03A1987062

Matrix: Solid

Lab Sample ID: 890-3965-3

### **Client Sample ID: SS03**

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 09:20 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		02/07/23 09:21	02/10/23 05:32	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		02/07/23 09:21	02/10/23 05:32	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/07/23 09:21	02/10/23 05:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130				02/07/23 09:21	02/10/23 05:32	1
o-Terphenyl	102		70 - 130				02/07/23 09:21	02/10/23 05:32	1

#### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.95	U	4.95		mg/Kg			02/02/23 14:39	1

#### **Client Sample ID: SS04**

#### Date Collected: 01/25/23 09:30

#### Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/06/23 08:20	02/06/23 19:02	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/06/23 08:20	02/06/23 19:02	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/06/23 08:20	02/06/23 19:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/06/23 08:20	02/06/23 19:02	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/06/23 08:20	02/06/23 19:02	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/06/23 08:20	02/06/23 19:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130				02/06/23 08:20	02/06/23 19:02	1
1,4-Difluorobenzene (Surr)	93		70 - 130				02/06/23 08:20	02/06/23 19:02	1
Method: TAL SOP Total BTEX - 1		Julation							
Analyte Total BTEX Method: SW846 8015 NM - Diese		Qualifier U	RL 0.00398	MDL	Unit mg/Kg	<u> </u>	Prepared	Analyzed	Dil Fac
Analyte Total BTEX	Result <0.00398	Qualifier U	0.00398	MDL		<u>D</u> 	Prepared		Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Diese	Result <0.00398	Qualifier U ics (DRO) ( Qualifier	0.00398		mg/Kg		<u>.</u>	02/07/23 09:28	1
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte	Result <0.00398 Range Organ Result <50.0	Qualifier U ics (DRO) ( Qualifier U	0.00398 GC) RL 50.0		mg/Kg Unit		<u>.</u>	02/07/23 09:28 Analyzed	1
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese	Result <0.00398 Range Organ Result <50.0 sel Range Orga	Qualifier U ics (DRO) ( Qualifier U	0.00398 GC) RL 50.0	MDL	mg/Kg Unit		<u>.</u>	02/07/23 09:28 Analyzed	1 Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	Result <0.00398 Range Organ Result <50.0 sel Range Orga	Qualifier U ics (DRO) ( Qualifier U nics (DRO) Qualifier	0.00398 GC) RL 50.0	MDL	mg/Kg Unit mg/Kg	<u>D</u>	Prepared	02/07/23 09:28 Analyzed 02/09/23 09:45	1 Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH	Result <0.00398 Range Organ Result <50.0 sel Range Orga Result	Qualifier U ics (DRO) ( Qualifier U unics (DRO) Qualifier U	0.00398 GC) RL 50.0 (GC) RL	MDL	mg/Kg Unit mg/Kg Unit	<u>D</u>	Prepared	02/07/23 09:28 Analyzed 02/09/23 09:45 Analyzed	1

#### Dil Fac %Recovery Qualifier Limits Prepared Analyzed Surrogate 70 - 130 02/08/23 10:22 1-Chlorooctane 94 02/09/23 00:13 1 o-Terphenyl 98 70 - 130 02/08/23 10:22 02/09/23 00:13 1

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Released to Imaging: 2/17/2025 2:02:20 PM

		Client	Sample R	lesults	5				
Client: Ensolum								Job ID: 890	
Project/Site: North Brushy PW Line								SDG: 03A1	198706
Client Sample ID: SS04							Lab Sar	nple ID: 890-	3965-
Date Collected: 01/25/23 09:30								Matri	ix: Soli
Date Received: 01/26/23 14:33									
Sample Depth: 0.5'									
-	_								
Method: EPA 300.0 - Anions, Ion C		-				_	- ·		
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	<4.95	U	4.95		mg/Kg			02/02/23 14:45	
Client Sample ID: SS05							Lab Sar	nple ID: 890-	3965-
Date Collected: 01/25/23 09:40									ix: Soli
Date Received: 01/26/23 14:33									
Sample Depth: 0.5'									
-									
Method: SW846 8021B - Volatile Or	rganic Comp	ounds (GC)							
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 19:29	
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 19:29	
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 19:29	
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/06/23 08:20	02/06/23 19:29	
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 19:29	
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/06/23 08:20	02/06/23 19:29	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	77		70 - 130				02/06/23 08:20	02/06/23 19:29	
1,4-Difluorobenzene (Surr)	93		70 - 130				02/06/23 08:20	02/06/23 19:29	
Method: TAL SOP Total BTEX - Tot Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Apolyzod	Dil Fa
Total BTEX	<0.00400		0.00400	MDL	mg/Kg		Fiepaieu	Analyzed 02/07/23 09:28	
	<0.00400	0	0.00400		mg/rtg			02/07/23 09.20	
 Method: SW846 8015 NM - Diesel F	Range Organ	ics (DRO) (G	C)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			02/09/23 09:45	
-									
Method: SW846 8015B NM - Diesel	Range Orga	nics (DRO) (0	GC)						
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/08/23 10:22	02/09/23 00:34	
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		02/08/23 10:22	02/09/23 00:34	
C10-C28)					-				
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/08/23 10:22	02/09/23 00:34	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	109		70 - 130				02/08/23 10:22	02/09/23 00:34	
o-Terphenyl	123		70 _ 130				02/08/23 10:22	02/09/23 00:34	
-									
Method: EPA 300.0 - Anions, Ion C		-							
Analyte	Posult	Qualifier	RI	MDI	Unit	п	Prenared	<b>Analyzed</b>	Dil Fa

AnalyteResultQualifierRLMDLUnitDPreparedAnalyzedDil FacChloride<4.97</td>U4.97mg/Kg02/02/23 14:511

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RL

MDL Unit

D

Prepared

Job ID: 890-3965-1 SDG: 03A1987062

#### Client Sample ID: SS06

Project/Site: North Brushy PW Line

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

Result Qualifier

Date Collected: 01/25/23 09:50 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

Analyte

Lab Sample ID: 890-3965-6

#### Matrix: Solid

Analyzed

			0.00201		mg/Kg				
Benzene	<0.00201	U	0100201		ilig/itg		02/06/23 08:20	02/06/23 19:56	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/06/23 08:20	02/06/23 19:56	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/06/23 08:20	02/06/23 19:56	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/06/23 08:20	02/06/23 19:56	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/06/23 08:20	02/06/23 19:56	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/06/23 08:20	02/06/23 19:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130				02/06/23 08:20	02/06/23 19:56	1
1,4-Difluorobenzene (Surr)	102		70 - 130				02/06/23 08:20	02/06/23 19:56	1
Method: TAL SOP Total BTEX - To	otal BTEX Calo	ulation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/07/23 09:28	1
Method: SW846 8015 NM - Diesel	Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/09/23 09:45	1
• · · · · · · · · · · · · · · · · · · ·									
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)						
Method: SW846 8015B NM - Dies Analyte		nics (DRO) Qualifier	(GC) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Gasoline Range Organics		Qualifier		MDL	Unit mg/Kg	<u>D</u>	Prepared 02/08/23 10:22	Analyzed	Dil Fac
	Result	Qualifier U	RL	MDL		<u> </u>			1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9	Qualifier U U	<b>RL</b> 49.9	MDL	mg/Kg	<u> </u>	02/08/23 10:22	02/09/23 00:54	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<b>Result</b> <49.9 <49.9	Qualifier U U U	RL           49.9           49.9	MDL	mg/Kg mg/Kg	<u>D</u>	02/08/23 10:22 02/08/23 10:22	02/09/23 00:54	1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <49.9	Qualifier U U U	RL 49.9 49.9 49.9	MDL	mg/Kg mg/Kg	<u>D</u>	02/08/23 10:22 02/08/23 10:22 02/08/23 10:22	02/09/23 00:54 02/09/23 00:54 02/09/23 00:54	1 1 1 <i>Dil Fac</i>
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result           <49.9	Qualifier U U U	RL 49.9 49.9 49.9 <i>Limits</i>	MDL	mg/Kg mg/Kg	<u> </u>	02/08/23 10:22 02/08/23 10:22 02/08/23 10:22 <b>Prepared</b>	02/09/23 00:54 02/09/23 00:54 02/09/23 00:54 <b>Analyzed</b>	1 1 1 <b>Dil Fac</b> 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <49.9	Qualifier U U Qualifier	RL           49.9           49.9           49.9           20.9           Limits           70 - 130           70 - 130	MDL	mg/Kg mg/Kg	<u> </u>	02/08/23 10:22 02/08/23 10:22 02/08/23 10:22 <b>Prepared</b> 02/08/23 10:22	02/09/23 00:54 02/09/23 00:54 02/09/23 00:54 <b>Analyzed</b> 02/09/23 00:54	1 1 1 <b>Dil Fac</b> 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <49.9	Qualifier U U Qualifier	RL           49.9           49.9           49.9           20.9           Limits           70 - 130           70 - 130		mg/Kg mg/Kg	<u>D</u>	02/08/23 10:22 02/08/23 10:22 02/08/23 10:22 <b>Prepared</b> 02/08/23 10:22	02/09/23 00:54 02/09/23 00:54 02/09/23 00:54 <b>Analyzed</b> 02/09/23 00:54	Dil Fac 1 1 1 Dil Fac Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: EPA 300.0 - Anions, Ion	Result           <49.9	Qualifier U U Qualifier	RL         49.9         49.9         49.9         20.9         Limits         70 - 130         70 - 130         8		mg/Kg mg/Kg mg/Kg		02/08/23 10:22 02/08/23 10:22 02/08/23 10:22 <b>Prepared</b> 02/08/23 10:22 02/08/23 10:22	02/09/23 00:54 02/09/23 00:54 02/09/23 00:54 02/09/23 00:54 02/09/23 00:54 02/09/23 00:54	1 1 1 1 1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: EPA 300.0 - Anions, Ion Analyte	Result           <49.9	Qualifier U U Qualifier	RL           49.9           49.9           49.9           130           70 - 130           70 - RL		mg/Kg mg/Kg mg/Kg Unit		02/08/23 10:22 02/08/23 10:22 02/08/23 10:22 <b>Prepared</b> 02/08/23 10:22 02/08/23 10:22 <b>Prepared</b>	02/09/23 00:54 02/09/23 00:54 02/09/23 00:54 <b>Analyzed</b> 02/09/23 00:54 02/09/23 00:54 Analyzed	1 1 <i>Dil Fac</i> 1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: EPA 300.0 - Anions, Ion Analyte Chloride	Result           <49.9	Qualifier U U Qualifier	RL           49.9           49.9           49.9           130           70 - 130           70 - RL		mg/Kg mg/Kg mg/Kg Unit		02/08/23 10:22 02/08/23 10:22 02/08/23 10:22 <b>Prepared</b> 02/08/23 10:22 02/08/23 10:22 <b>Prepared</b>	02/09/23 00:54 02/09/23 00:54 02/09/23 00:54 <b>Analyzed</b> 02/09/23 00:54 02/09/23 00:54 02/09/23 10:54 02/02/23 14:57	1 1 <i>Dil Fac</i> 1 1 <b>Dil Fac</b> 1

Method: SW846 8021B - Volat	ile Organic Comp	ounds (GC	)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/06/23 08:20	02/06/23 20:23	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/06/23 08:20	02/06/23 20:23	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/06/23 08:20	02/06/23 20:23	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		02/06/23 08:20	02/06/23 20:23	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/06/23 08:20	02/06/23 20:23	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/06/23 08:20	02/06/23 20:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130				02/06/23 08:20	02/06/23 20:23	1

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Released to Imaging: 2/17/2025 2:02:20 PM

#### **Client Sample Results**

Job ID: 890-3965-1 SDG: 03A1987062

Lab Sample ID: 890-3965-7

Lab Sample ID: 890-3965-8

Matrix: Solid

#### Client Sample ID: SS07

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 10:00 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

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

%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
96		70 - 130				02/06/23 08:20	02/06/23 20:23	1
- Total BTEX Calc	ulation							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
< 0.00396	U	0.00396		mg/Kg			02/07/23 09:28	1
sel Range Organ	ics (DRO) (	GC)						
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<49.9	U	49.9		mg/Kg			02/09/23 09:45	1
incol Bango Orga								
	mes directi							
	- Total BTEX Calo Result <0.00396 sel Range Organ Result <49.9	- Total BTEX Calculation Result Qualifier <0.00396 U sel Range Organics (DRO) ( Result Qualifier <49.9 U	- Total BTEX Calculation           - Result         Qualifier           <0.00396	Image: sel Range Organics (DRO) (GC)         Result Qualifier         RL MDL           <896	- Total BTEX Calculation - Total BTEX Calculation - Colour - Colour - Calculation - Calc	Image: Product of the system       Product of	- Total BTEX Calculation       02/06/23 08:20         - Total BTEX Calculation       02/06/23 08:20         - Construction       0000396         - Construction       00000396         - Construction       00000000         - Construction       00000000000         - Construction       00000000000000000000000000         - Construction       000000000000000000000000000000000000	Image: Problem         Prepared         Analyzed           - Total BTEX Calculation         02/06/23 08:20         02/06/23 20:23           - Total BTEX Calculation         MDL         Unit         D         Prepared         Analyzed           <0.00396

Analyte	Result	Quaimer	RL	WDL	Unit	U	Frepareu	Analyzeu	DIFAC
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		02/08/23 10:22	02/09/23 01:14	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		02/08/23 10:22	02/09/23 01:14	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/08/23 10:22	02/09/23 01:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130				02/08/23 10:22	02/09/23 01:14	1
o-Terphenyl	106		70 - 130				02/08/23 10:22	02/09/23 01:14	1

#### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.96	U	4.96		mg/Kg			02/02/23 15:04	1

#### Client Sample ID: SS08

Date Collected: 01/25/23 10:10 Date Received: 01/26/23 14:33 Sample Depth: 0.5'

#### 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 02/06/23 08:20 02/06/23 20:49 Toluene <0.00199 U 0.00199 02/06/23 08:20 02/06/23 20:49 mg/Kg 1 Ethylbenzene <0.00199 U 0.00199 mg/Kg 02/06/23 08:20 02/06/23 20:49 m-Xylene & p-Xylene <0.00398 U 0.00398 02/06/23 08:20 02/06/23 20:49 mg/Kg 1 o-Xylene <0.00199 U 0.00199 mg/Kg 02/06/23 08:20 02/06/23 20:49 1 Xylenes, Total <0.00398 U 0.00398 mg/Kg 02/06/23 08:20 02/06/23 20:49 1 %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analvzed 70 - 130 4-Bromofluorobenzene (Surr) 99 02/06/23 08:20 02/06/23 20:49 1 1,4-Difluorobenzene (Surr) 101 70 - 130 02/06/23 08:20 02/06/23 20:49 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL MDL Unit D Dil Fac Prepared Analyzed Total BTEX <0.00398 Ū 0.00398 mg/Kg 02/07/23 09:28 1 Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac <50.0 U Total TPH 50.0 02/09/23 09:45 mg/Kg 1

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Matrix: Solid

Job ID: 890-3965-1 SDG: 03A1987062

Lab Sample ID: 890-3965-9

Matrix: Solid

#### Client Sample ID: SS08

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 10:10 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/08/23 10:22	02/09/23 01:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/08/23 10:22	02/09/23 01:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/08/23 10:22	02/09/23 01:35	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				02/08/23 10:22	02/09/23 01:35	1
o-Terphenyl	112		70 - 130				02/08/23 10:22	02/09/23 01:35	1

#### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	160	4.98	mg/Kg			02/02/23 10:57	1

#### Client Sample ID: SS09

#### Date Collected: 01/25/23 10:20

Date Received: 01/26/23 14:33 Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 21:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 21:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 21:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/06/23 08:20	02/06/23 21:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 21:16	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/06/23 08:20	02/06/23 21:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				02/06/23 08:20	02/06/23 21:16	1
1,4-Difluorobenzene (Surr)	98		70 - 130				02/06/23 08:20	02/06/23 21:16	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/07/23 09:28	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			02/09/23 09:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.8	U	49.8		mg/Kg		02/08/23 10:22	02/09/23 01:55	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.8	U	49.8		mg/Kg		02/08/23 10:22	02/09/23 01:55	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/08/23 10:22	02/09/23 01:55	1
	<b>*</b> / <b>P</b>	0					- <i>'</i>		<b>5</b>
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130				02/08/23 10:22	02/09/23 01:55	1
o-Terphenyl	115		70 - 130				02/08/23 10:22	02/09/23 01:55	1

		Clien	t Sample F	Results	;				
Client: Ensolum								Job ID: 890	
Project/Site: North Brushy PW Line								SDG: 03A1	98706
Client Sample ID: SS09							Lab Sar	nple ID: 890-	3965-
Date Collected: 01/25/23 10:20								Matri	x: Sol
Date Received: 01/26/23 14:33									
Sample Depth: 0.5'									
_ Method: EPA 300.0 - Anions, Ion C	hromatograp	ohy - Soluble	9						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Chloride	25.5		4.95		mg/Kg			02/02/23 11:02	
Client Sample ID: SS10							Lab Sam	ple ID: 890-3	965-1
Date Collected: 01/25/23 10:30								•	x: Sol
Date Received: 01/26/23 14:33									
Sample Depth: 0.5'									
Method: SW846 8021B - Volatile O Analyte	• •	Ounds (GC) Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Benzene	<0.00202		0.00202		mg/Kg		02/06/23 08:20	02/06/23 21:42	
Toluene	<0.00202		0.00202		mg/Kg		02/06/23 08:20	02/06/23 21:42	
Ethylbenzene	<0.00202		0.00202		mg/Kg		02/06/23 08:20	02/06/23 21:42	
m-Xylene & p-Xylene	< 0.00202		0.00403		mg/Kg		02/06/23 08:20	02/06/23 21:42	
o-Xylene	<0.00400		0.00202		mg/Kg		02/06/23 08:20	02/06/23 21:42	
Xylenes, Total	< 0.00403		0.00403		mg/Kg		02/06/23 08:20	02/06/23 21:42	
	~~ <b>-</b>						_ ,		
Surrogate	%Recovery 107	Qualifier	Limits				Prepared	Analyzed 02/06/23 21:42	Dil I
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	95		70 <sub>-</sub> 130 70 <sub>-</sub> 130				02/06/23 08:20 02/06/23 08:20	02/06/23 21:42	
	95		70 - 730				02/00/23 08.20	02/00/23 21.42	
Method: TAL SOP Total BTEX - Tot	tal BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Total BTEX	<0.00403	U	0.00403		mg/Kg			02/07/23 09:28	
- Mathadi SW/846 9045 NM Diasal I	Banga Organ								
Method: SW846 8015 NM - Diesel F Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Total TPH		U	49.8		mg/Kg			02/09/23 09:45	
		C C	1010					02,00,20 00.10	
Method: SW846 8015B NM - Diese	I Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil I
Gasoline Range Organics	<49.8	U	49.8		mg/Kg		02/08/23 10:22	02/09/23 02:15	
(GRO)-C6-C10	-40.0		40.0		m m //		00/00/00 40:00	00/00/00 00:45	
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		02/08/23 10:22	02/09/23 02:15	
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/08/23 10:22	02/09/23 02:15	
	~-						<b>_</b> .	<b>.</b>	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dill
1-Chlorooctane	95		70 - 130				02/08/23 10:22	02/09/23 02:15	
o-Terphenyl	104		70 - 130				02/08/23 10:22	02/09/23 02:15	
Method: EPA 300.0 - Anions, Ion C	hromatograp	ohy - Soluble	e						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Chloride	18.0		5.00		ma/Ka			02/02/23 11:07	

02/02/23 11:07

Chloride

5.00

mg/Kg

18.0

#### Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
58-A-11-G MS	Matrix Spike	95	101	
958-A-11-H MSD	Matrix Spike Duplicate	95	103	
3965-1	SS01	84	91	
965-2	SS02	98	92	
3965-3	SS03	96	96	
965-4	SS04	83	93	
3965-5	SS05	77	93	
3965-6	SS06	100	102	
965-7	SS07	89	96	
965-8	SS08	99	101	
-3965-9	SS09	98	98	
3965-10	SS10	107	95	
880-45550/1-A	Lab Control Sample	91	111	
SD 880-45550/2-A	Lab Control Sample Dup	94	109	
B 880-45550/5-A	Method Blank	65 S1-	95	
Surragata Lagand				
Surrogate Legend				
B = 4-Bromofluorober				
FBZ = 1,4-Difluorobenz	zene (Surr)			

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

#### Percent Surrogate Recovery (Acceptance Limits) 1CO1 OTPH1 (70-130) (70-130) **Client Sample ID** Lab Sample ID 880-24450-A-14-D MS Matrix Spike 100 88 880-24450-A-14-E MSD Matrix Spike Duplicate 113 102 890-3961-A-7-D MS Matrix Spike 109 94 890-3961-A-7-E MSD 123 103 Matrix Spike Duplicate 890-3965-1 SS01 91 95 890-3965-2 SS02 83 89 890-3965-3 SS03 102 102 890-3965-4 SS04 94 98 890-3965-5 SS05 109 123 890-3965-6 SS06 100 113 890-3965-7 SS07 99 106 SS08 890-3965-8 106 112 SS09 890-3965-9 104 115 SS10 890-3965-10 95 104 LCS 880-45658/2-A Lab Control Sample 105 105 LCS 880-45763/2-A Lab Control Sample 120 113 LCSD 880-45658/3-A Lab Control Sample Dup 95 98 LCSD 880-45763/3-A 121 110 Lab Control Sample Dup MB 880-45658/1-A Method Blank 124 126 MB 880-45763/1-A Method Blank 136 S1+ 139 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Job ID: 890-3965-1 SDG: 03A1987062

Prep Type: Total/NA

Prep Type: Total/NA

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

Lab Sample ID: MB 880-45550/5-A Matrix: Solid Analysis Batch: 45543							Client Sa	mple ID: Metho Prep Type: 7 Prep Batcl	Total/NA
-	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 11:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 11:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 11:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/06/23 08:20	02/06/23 11:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/23 08:20	02/06/23 11:34	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/06/23 08:20	02/06/23 11:34	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	65	S1-	70 - 130				02/06/23 08:20	02/06/23 11:34	1
1,4-Difluorobenzene (Surr)	95		70 - 130				02/06/23 08:20	02/06/23 11:34	1
_ Lab Sample ID: LCS 880-45550/1-A						c	lient Sample I	D: Lab Control	Sample
Matrix: Solid								Prep Type: 1	
Analysis Batch: 45543								Prep Batcl	
•			Spike	LCS LCS	;			%Rec	
Analyte			Added	Result Qua	lifier Unit		D %Rec	Limits	

Analyte	Added	Result Qualifie	er Unit	D	%Rec	Limits	
Benzene	0.100	0.1110	mg/Kg		111	70 - 130	
Toluene	0.100	0.1021	mg/Kg		102	70 - 130	
Ethylbenzene	0.100	0.09568	mg/Kg		96	70 - 130	
m-Xylene & p-Xylene	0.200	0.1836	mg/Kg		92	70 - 130	
o-Xylene	0.100	0.09636	mg/Kg		96	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

#### Lab Sample ID: LCSD 880-45550/2-A

#### Matrix: Solid

Analysis Batch: 45543						Prep	Batch:	45550	
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1173		mg/Kg		117	70 - 130	5	35
Toluene	0.100	0.1075		mg/Kg		108	70 - 130	5	35
Ethylbenzene	0.100	0.09954		mg/Kg		100	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1915		mg/Kg		96	70 - 130	4	35
o-Xylene	0.100	0.1010		mg/Kg		101	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

#### Lab Sample ID: 890-3958-A-11-G MS

## Matrix: Solid

Analysis Batch: 45543									Prep	Batch: 45550
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	< 0.00202	U	0.101	0.1117		mg/Kg		111	70 - 130	
Toluene	<0.00202	U	0.101	0.1017		mg/Kg		101	70 - 130	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Job ID: 890-3965-1

SDG: 03A1987062

MS MS

0.1024

0.2003

0.09987

**Result Qualifier** 

Spike

Added

0.101

0.202

0.101

Client: Ensolum Project/Site: North Brushy PW Line

Matrix: Solid

Analyte

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 45543

Lab Sample ID: 890-3958-A-11-G MS

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

Sample Sample

<0.00202 U

<0.00403 U

<0.00202 U

Result Qualifier

			Job I	D: 890-3965-1	5
			SDG	: 03A1987062	
		Client	Sample ID	: Matrix Spike	
			Prep 1	Type: Total/NA	
			Prep	Batch: 45550	2
			%Rec		
Unit	D	%Rec	Limits		2
mg/Kg		101	70 - 130		
mg/Kg		99	70 - 130		
mg/Kg		99	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

#### Lab Sample ID: 890-3958-A-11-H MSD Matrix: Solid

Analysis Batch: 45543

1,4-Difluorobenzene (Surr)

Analysis Batch: 45543									Prep	Batch:	45550	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	<0.00202	U	0.0990	0.09848		mg/Kg		99	70 - 130	13	35	
Toluene	<0.00202	U	0.0990	0.09369		mg/Kg		95	70 - 130	8	35	i
Ethylbenzene	<0.00202	U	0.0990	0.08634		mg/Kg		87	70 - 130	17	35	
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1696		mg/Kg		86	70 - 130	17	35	i
o-Xylene	<0.00202	U	0.0990	0.08644		mg/Kg		87	70 - 130	14	35	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									
4-Bromofluorobenzene (Surr)	95		70 - 130									

70 - 130

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

103

Lab Sample ID: MB 880-45658/1-A Matrix: Solid Analysis Batch: 45831							Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	otal/NA
	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/09/23 20:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/09/23 20:17	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/09/23 20:17	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130				02/07/23 09:21	02/09/23 20:17	1
o-Terphenyl	126		70 - 130				02/07/23 09:21	02/09/23 20:17	1

#### Client Sample ID: Lab Control Sample Lab Sample ID: LCS 880-45658/2-A Matrix: Solid Prep Type: Total/NA Analysis Batch: 45831 Prep Batch: 45658 Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits 1000 885.3 89 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 909.8 mg/Kg 91 70 - 130

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C10-C28)

Client: Ensolum Project/Site: North Brushy PW Line

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

	1
Job ID: 890-3965-1 SDG: 03A1987062	2
	3
Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 45658	4

Lab Sample ID: LCS 880-4565 Matrix: Solid	8/2-A						Client	Sample		Type: Tot	al/NA
Analysis Batch: 45831									Prep	Batch: 4	45658
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	105		70 - 130								
o-Terphenyl	105		70 - 130								
Lab Sample ID: LCSD 880-456	58/3-A					Clier	nt Sam	ple ID:	Lab Contro	I Sample	e Dup
Matrix: Solid									Prep 1	Type: Tot	al/NA
Analysis Batch: 45831									Prep	Batch: 4	45658
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	871.4		mg/Kg		87	70 - 130	2	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	824.8		mg/Kg		82	70 - 130	10	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	95		70 - 130								
o-Terphenyl	98		70 - 130								
Lab Sample ID: 890-3961-A-7-	D MS							Client	Sample ID		-
Matrix: Solid									Prep 1	Type: Tot	al/NA
Analysis Batch: 45831										Batch: 4	45658
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9	U	999	902.9		mg/Kg		88	70 - 130		
(GRO)-C6-C10 Diesel Range Organics (Over	97.8		999	867.4		mg/Kg		77	70 - 130		
C10-C28)	97.0		999	007.4		mg/Kg		11	70 - 130		
010 020)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	109		70 - 130								
o-Terphenyl	94		70 - 130								
Lab Sample ID: 890-3961-A-7-						U	ient Sa	ample IL	D: Matrix S		
Matrix: Solid										ype: Tot	
Analysis Batch: 45831	0	0	0	MOD	MOD					Batch: 4	
Anchite	-	Sample	Spike		MSD Ovelifier	11		% Dee	%Rec	000	RPD
Analyte	<49.9	Qualifier	Added		Qualifier	Unit	<u>D</u>	408	Limits		Limit 20
Gasoline Range Organics (GRO)-C6-C10	<49.9	0	1000	1103		mg/Kg		108	70 - 130	20	20
Diesel Range Organics (Over	97.8		1000	952.5		mg/Kg		85	70 - 130	9	20
C10-C28)						5.15				-	
		MOD									
Surrogata		MSD Qualifiar	l incita								
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	123		70 - 130 70 - 130								
o-Terphenyl	103		70 - 130								

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Spike Added

1000

1000

Client: Ensolum Project/Site: North Brushy PW Line

Lab Sample ID: MB 880-45763/1-A

Matrix: Solid

(GRO)-C6-C10

Analyte

C10-C28)

Surrogate

o-Terphenyl

Analyte

C10-C28)

1-Chlorooctane

Matrix: Solid

Analysis Batch: 45729

Gasoline Range Organics (GRO)-C6-C10

Diesel Range Organics (Over

Analysis Batch: 45729

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Lab Sample ID: LCS 880-45763/2-A

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

MB MB Result Qualifier

<50.0 U

<50.0 U

<50.0 U MB MB

%Recovery Qualifier

136 S1+

139 S1+

								SE	DG: 03A1	1987062	
GC) (Co	ntinue	ed)									
							Client S	Pre	D: Metho p Type: 1	Fotal/NA	
								Pr	ep Batch	1: 45763	
RL		MDL	Unit		D	Р	repared	Ana	alyzed	Dil Fac	
50.0			mg/Kg	9	_	02/0	8/23 10:22	02/08/	23 21:23	1	
50.0			mg/Kg	9		02/0	8/23 10:22	02/08/	23 21:23	1	
50.0			mg/Kg	9		02/0	8/23 10:22	02/08/	23 21:23	1	Ī
Limits						P	repared	Ana	alyzed	Dil Fac	
70 - 130						02/0	8/23 10:22	02/08/	23 21:23	1	
70 - 130						02/0	8/23 10:22	02/08/	23 21:23	1	
					С	lient	Sample	Pre	Control p Type: 1 ep Batch	Fotal/NA	
oike	LCS	LCS						%Rec	ер Бассі	1. 45/63	
ded	Result	Qual	ifier	Unit		D	%Rec	Limits			2
000	852.5			mg/Kg			85	70 - 130	 		1
000	939.4			mg/Kg			94	70 - 130			

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	113		70 - 130

#### Lab Sample ID: LCSD 880-45763/3-A

#### Matrix: Solid nalvojo Rotobi 45720

Analysis Batch: 45729							Prep	Prep Batch: 4			
	Spike	LCSD	LCSD				%Rec		RPD		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit		
Gasoline Range Organics	1000	859.7		mg/Kg		86	70 - 130	1	20		
(GRO)-C6-C10											
Diesel Range Organics (Over	1000	922.4		mg/Kg		92	70 - 130	2	20		
C10-C28)											

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	110		70 - 130

#### Lab Sample ID: 880-24450-A-14-D MS Matrix: Solid

Analysis Batch: 45729									Prep	o Batch: 457	63
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9	U F1 F2	999	684.7	F1	mg/Kg		67	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U F1	999	693.6	F1	mg/Kg		67	70 - 130		
C10-C28)											

Client: Ensolum Project/Site: North Brushy PW Line

Matrix: Solid

Analysis Batch: 45729

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

# Lab Sample ID: 880-24450-A-14-D MS

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	100		70 _ 130
o-Terphenyl	88		70 - 130

#### Lab Sample ID: 880-24450-A-14-E MSD Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography

Matrix: Solid Analysis Batch: 45729										Type: To Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1 F2	999	1045	F2	mg/Kg		103	70 - 130	42	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	806.9		mg/Kg		78	70 - 130	15	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	113		70 - 130								
o-Terphenyl	102		70 - 130								

Lab Sample ID: MB 880-45084/1-A Matrix: Solid										(	Client S	ample ID:	Method Type: S	
Analysis Batch: 45244												Prep	Type: 5	oluble
Analysis Balcii. 45244		в мв												
Ameliate		D MD		RL		MDL	11		D	<b>D</b>	awawad	Analum		Dil Fac
Analyte						WDL			<u> </u>	Pr	epared	Analyz		
Chloride	<5.0	00 U		5.00			mg/Kg					02/02/23	11:02	1
- Lab Sample ID: LCS 880-45084/2-A									Clie	nt	Sample	ID: Lab Co	ontrol S	ample
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 45244														
-			Spike		LCS	LCS						%Rec		
Analyte			Added		Result	Qual	ifier	Unit	I	D	%Rec	Limits		
Analyte														
Chloride			250		257.6			mg/Kg			103	90 - 110		
Chloride			250		257.6				iont S				l Samol	
Chloride Lab Sample ID: LCSD 880-45084/3-A			250		257.6				ient Sa	am		_ab Contro		
Chloride Lab Sample ID: LCSD 880-45084/3-A Matrix: Solid			250		257.6				ient Sa	am		_ab Contro	l Sampl Type: S	
Chloride Lab Sample ID: LCSD 880-45084/3-A							n		ient Sa	am		_ab Contro Prep		oluble
Chloride Lab Sample ID: LCSD 880-45084/3-A Matrix: Solid Analysis Batch: 45244			250 Spike Added		257.6 LCSD Result					am		_ab Contro		
Chloride Lab Sample ID: LCSD 880-45084/3-A Matrix: Solid			Spike		LCSD			Cli			ple ID: I	-ab Contro Prep %Rec	Type: S	oluble RPD
Chloride Lab Sample ID: LCSD 880-45084/3-A Matrix: Solid Analysis Batch: 45244 Analyte Chloride			Spike Added		LCSD Result			Cli			<b>ple ID: I</b> %Rec 103	-ab Contro Prep %Rec Limits 90 - 110	Type: S	oluble RPD Limit 20
Chloride Lab Sample ID: LCSD 880-45084/3-A Matrix: Solid Analysis Batch: 45244 Analyte			Spike Added		LCSD Result			Cli			<b>ple ID: I</b> %Rec 103	-ab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: S <u>RPD</u> 0 : Matrix	Oluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCSD 880-45084/3-A Matrix: Solid Analysis Batch: 45244 Analyte Chloride Lab Sample ID: 880-24126-A-1-B MS			Spike Added		LCSD Result			Cli			<b>ple ID: I</b> %Rec 103	-ab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: S	Oluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCSD 880-45084/3-A Matrix: Solid Analysis Batch: 45244 Analyte Chloride Lab Sample ID: 880-24126-A-1-B MS Matrix: Solid Analysis Batch: 45244		ample	Spike Added		LCSD Result 258.5			Cli			<b>ple ID: I</b> %Rec 103	-ab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: S <u>RPD</u> 0 : Matrix	Oluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCSD 880-45084/3-A Matrix: Solid Analysis Batch: 45244 Analyte Chloride Lab Sample ID: 880-24126-A-1-B MS Matrix: Solid Analysis Batch: 45244		•	Spike Added 250		LCSD Result 258.5	Qual	ifier	Cli	I		<b>ple ID: I</b> %Rec 103	-ab Contro Prep %Rec Limits 90 - 110 Sample ID Prep	Type: S <u>RPD</u> 0 : Matrix	Oluble RPD Limit 20 Spike

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Job ID: 890-3965-1

SDG: 03A1987062

Prep Type: Total/NA

Prep Batch: 45763

**Client Sample ID: Matrix Spike** 

**Client Sample ID: Matrix Spike Duplicate** 

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#### Job ID: 890-3965-1 SDG: 03A1987062

Client: Ensolum Project/Site: North Brushy PW Line

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-24126-A-1-C	MSD							Client S	ample IC	D: Matrix Sp	oike Dup	olicate
Matrix: Solid										Prep	Type: S	oluble
Analysis Batch: 45244												
	Sample	Sample	Spike		MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	I	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	312	F1	251		644.5	F1	mg/Kg		133	90 - 110	0	20
Lab Sample ID: MB 880-45086/1-/	A								Client S	Sample ID:	Method	Blank
Matrix: Solid										Prep	Type: S	oluble
Analysis Batch: 45245												
		MB MB										
Analyte	R	esult Qualifier		RL		MDL Unit		DF	Prepared	Analyz	ed	Dil Fac
Chloride		<5.00 U		5.00		mg/Kg	9			02/02/23	08:28	1
	- <b>A</b>							Clien	t Sample	e ID: Lab Co	ontrol S	ample
Matrix: Solid										Prep	Type: S	oluble
Analysis Batch: 45245												
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250		274.6		mg/Kg		110	90 _ 110		
Lab Sample ID: LCSD 880-45086/	/3-A						CI	ient San	nple ID:	Lab Contro	ol Sampl	le Dup
Matrix: Solid										Prep	Type: S	oluble
Analysis Batch: 45245												
-			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added	I	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250		260.7		mg/Kg		104	90 - 110	5	20
 Lab Sample ID: 890-3959-A-64-B	MS								Client	Sample ID	: Matrix	Spike
Matrix: Solid										Prep	Type: S	oluble
Analysis Batch: 45245												
	Sample	Sample	Spike		MS	MS				%Rec		
Analyte	Result	Qualifier	Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	336	F1	250		693.6	F1	mg/Kg		143	90 - 110		
	MSD							Client S	ample IC	D: Matrix Sp	oike Dup	olicate
										Prep	Type: S	oluble
Matrix: Solid												
Matrix: Solid Analysis Batch: 45245												
	Sample	Sample	Spike		MSD	MSD				%Rec		RPD
	-	Sample Qualifier	Spike Added	I		MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit

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Client: Ensolum Project/Site: North Brushy PW Line

#### Job ID: 890-3965-1 SDG: 03A1987062

#### **GC VOA**

#### Analysis Batch: 45543

mahala Dataha 45540					
nalysis Batch: 45543					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3965-1	SS01	Total/NA	Solid	8021B	45550
890-3965-2	SS02	Total/NA	Solid	8021B	45550
890-3965-3	SS03	Total/NA	Solid	8021B	45550
890-3965-4	SS04	Total/NA	Solid	8021B	45550
890-3965-5	SS05	Total/NA	Solid	8021B	45550
890-3965-6	SS06	Total/NA	Solid	8021B	45550
890-3965-7	SS07	Total/NA	Solid	8021B	45550
890-3965-8	SS08	Total/NA	Solid	8021B	45550
890-3965-9	SS09	Total/NA	Solid	8021B	45550
890-3965-10	SS10	Total/NA	Solid	8021B	45550
MB 880-45550/5-A	Method Blank	Total/NA	Solid	8021B	45550
LCS 880-45550/1-A	Lab Control Sample	Total/NA	Solid	8021B	45550
LCSD 880-45550/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45550
890-3958-A-11-G MS	Matrix Spike	Total/NA	Solid	8021B	45550
890-3958-A-11-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45550
rep Batch: 45550					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3965-1	SS01	Total/NA	Solid	5035	
890-3965-2	SS02	Total/NA	Solid	5035	
890-3965-3	SS03	Total/NA	Solid	5035	

#### Prep Batch: 45550

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3965-1	SS01	Total/NA	Solid	5035	
890-3965-2	SS02	Total/NA	Solid	5035	
890-3965-3	SS03	Total/NA	Solid	5035	
890-3965-4	SS04	Total/NA	Solid	5035	
890-3965-5	SS05	Total/NA	Solid	5035	
890-3965-6	SS06	Total/NA	Solid	5035	
890-3965-7	SS07	Total/NA	Solid	5035	
890-3965-8	SS08	Total/NA	Solid	5035	
890-3965-9	SS09	Total/NA	Solid	5035	
890-3965-10	SS10	Total/NA	Solid	5035	
MB 880-45550/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45550/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45550/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3958-A-11-G MS	Matrix Spike	Total/NA	Solid	5035	
890-3958-A-11-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 45665

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3965-1	SS01	Total/NA	Solid	Total BTEX	
890-3965-2	SS02	Total/NA	Solid	Total BTEX	
890-3965-3	SS03	Total/NA	Solid	Total BTEX	
890-3965-4	SS04	Total/NA	Solid	Total BTEX	
890-3965-5	SS05	Total/NA	Solid	Total BTEX	
890-3965-6	SS06	Total/NA	Solid	Total BTEX	
890-3965-7	SS07	Total/NA	Solid	Total BTEX	
890-3965-8	SS08	Total/NA	Solid	Total BTEX	
890-3965-9	SS09	Total/NA	Solid	Total BTEX	
890-3965-10	SS10	Total/NA	Solid	Total BTEX	

Client: Ensolum Project/Site: North Brushy PW Line

#### GC Semi VOA

#### Prep Batch: 45658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3965-2	SS02	Total/NA	Solid	8015NM Prep	
890-3965-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-45658/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45658/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3961-A-7-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3961-A-7-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 45729

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3965-1	SS01	Total/NA	Solid	8015B NM	45763
890-3965-4	SS04	Total/NA	Solid	8015B NM	45763
890-3965-5	SS05	Total/NA	Solid	8015B NM	45763
890-3965-6	SS06	Total/NA	Solid	8015B NM	45763
890-3965-7	SS07	Total/NA	Solid	8015B NM	45763
890-3965-8	SS08	Total/NA	Solid	8015B NM	45763
890-3965-9	SS09	Total/NA	Solid	8015B NM	45763
890-3965-10	SS10	Total/NA	Solid	8015B NM	45763
MB 880-45763/1-A	Method Blank	Total/NA	Solid	8015B NM	45763
LCS 880-45763/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45763
LCSD 880-45763/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45763
880-24450-A-14-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45763
880-24450-A-14-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45763

#### Prep Batch: 45763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3965-1	SS01	Total/NA	Solid	8015NM Prep	
890-3965-4	SS04	Total/NA	Solid	8015NM Prep	
890-3965-5	SS05	Total/NA	Solid	8015NM Prep	
890-3965-6	SS06	Total/NA	Solid	8015NM Prep	
890-3965-7	SS07	Total/NA	Solid	8015NM Prep	
890-3965-8	SS08	Total/NA	Solid	8015NM Prep	
890-3965-9	SS09	Total/NA	Solid	8015NM Prep	
890-3965-10	SS10	Total/NA	Solid	8015NM Prep	
MB 880-45763/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45763/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45763/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-24450-A-14-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-24450-A-14-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 45831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3965-2	SS02	Total/NA	Solid	8015B NM	45658
890-3965-3	SS03	Total/NA	Solid	8015B NM	45658
MB 880-45658/1-A	Method Blank	Total/NA	Solid	8015B NM	45658
LCS 880-45658/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45658
LCSD 880-45658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45658
890-3961-A-7-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45658
890-3961-A-7-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45658

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#### Job ID: 890-3965-1 SDG: 03A1987062

Client: Ensolum Project/Site: North Brushy PW Line

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#### Job ID: 890-3965-1 SDG: 03A1987062

## GC Semi VOA

#### Analysis Batch: 45862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3965-1	SS01	Total/NA	Solid	8015 NM	
390-3965-2	SS02	Total/NA	Solid	8015 NM	
390-3965-3	SS03	Total/NA	Solid	8015 NM	
390-3965-4	SS04	Total/NA	Solid	8015 NM	
390-3965-5	SS05	Total/NA	Solid	8015 NM	
390-3965-6	SS06	Total/NA	Solid	8015 NM	
390-3965-7	SS07	Total/NA	Solid	8015 NM	
390-3965-8	SS08	Total/NA	Solid	8015 NM	
390-3965-9	SS09	Total/NA	Solid	8015 NM	
390-3965-10	SS10	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 45084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3965-1	SS01	Soluble	Solid	DI Leach	
890-3965-2	SS02	Soluble	Solid	DI Leach	
890-3965-3	SS03	Soluble	Solid	DI Leach	
890-3965-4	SS04	Soluble	Solid	DI Leach	
890-3965-5	SS05	Soluble	Solid	DI Leach	
890-3965-6	SS06	Soluble	Solid	DI Leach	
890-3965-7	SS07	Soluble	Solid	DI Leach	
MB 880-45084/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45084/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45084/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-24126-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-24126-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Leach Batch: 45086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3965-8	SS08	Soluble	Solid	DI Leach	
890-3965-9	SS09	Soluble	Solid	DI Leach	
890-3965-10	SS10	Soluble	Solid	DI Leach	
MB 880-45086/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45086/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45086/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3959-A-64-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3959-A-64-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 45244

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3965-1	SS01	Soluble	Solid	300.0	45084
890-3965-2	SS02	Soluble	Solid	300.0	45084
890-3965-3	SS03	Soluble	Solid	300.0	45084
890-3965-4	SS04	Soluble	Solid	300.0	45084
890-3965-5	SS05	Soluble	Solid	300.0	45084
890-3965-6	SS06	Soluble	Solid	300.0	45084
890-3965-7	SS07	Soluble	Solid	300.0	45084
MB 880-45084/1-A	Method Blank	Soluble	Solid	300.0	45084
LCS 880-45084/2-A	Lab Control Sample	Soluble	Solid	300.0	45084
LCSD 880-45084/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45084

Client: Ensolum Project/Site: North Brushy PW Line

#### HPLC/IC (Continued)

#### Analysis Batch: 45244 (Continued)

	Sample ID -24126-A-1-B MS	Client Sample ID Matrix Spike	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 45084
880-	-24126-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45084
Anal	ysis Batch: 45245					

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3965-8	SS08	Soluble	Solid	300.0	45086
890-3965-9	SS09	Soluble	Solid	300.0	45086
890-3965-10	SS10	Soluble	Solid	300.0	45086
MB 880-45086/1-A	Method Blank	Soluble	Solid	300.0	45086
LCS 880-45086/2-A	Lab Control Sample	Soluble	Solid	300.0	45086
LCSD 880-45086/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45086
890-3959-A-64-B MS	Matrix Spike	Soluble	Solid	300.0	45086
890-3959-A-64-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45086

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Job ID: 890-3965-1

SDG: 03A1987062

Project/Site: North Brushy PW Line

Job ID: 890-3965-1 SDG: 03A1987062

#### Lab Sample ID: 890-3965-1 Matrix: Solid

Date Collected: 01/25/23 09:00 Date Received: 01/26/23 14:33

**Client Sample ID: SS01** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 17:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			45862	02/09/23 09:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45763	02/08/23 10:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45729	02/08/23 23:52	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	45084	01/30/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1			45244	02/02/23 14:27	СН	EET MID

#### **Client Sample ID: SS02**

#### Date Collected: 01/25/23 09:10

Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 18:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			45862	02/10/23 10:33	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 05:11	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	45084	01/30/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1			45244	02/02/23 14:33	СН	EET MID

#### **Client Sample ID: SS03**

#### Date Collected: 01/25/23 09:20

Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 18:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			45862	02/10/23 10:33	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 05:32	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45084	01/30/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1			45244	02/02/23 14:39	СН	EET MID

#### **Client Sample ID: SS04** Date Collected: 01/25/23 09:30 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 19:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID

**Eurofins Carlsbad** 

Matrix: Solid

#### Lab Sample ID: 890-3965-2 Matrix: Solid

Lab Sample ID: 890-3965-3

Lab Sample ID: 890-3965-4

Matrix: Solid

3

5 6

Project/Site: North Brushy PW Line

Job ID: 890-3965-1 SDG: 03A1987062

#### Lab Sample ID: 890-3965-4 Matrix: Solid

Lab Sample ID: 890-3965-5

Date Collected: 01/25/23 09:30 Date Received: 01/26/23 14:33

**Client Sample ID: SS04** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			45862	02/09/23 09:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45763	02/08/23 10:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45729	02/09/23 00:13	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45084	01/30/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1			45244	02/02/23 14:45	СН	EET MID

#### Client Sample ID: SS05

#### Date Collected: 01/25/23 09:40 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 19:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			45862	02/09/23 09:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45763	02/08/23 10:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45729	02/09/23 00:34	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	45084	01/30/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1			45244	02/02/23 14:51	СН	EET MID

#### **Client Sample ID: SS06**

Date Collected: 01/25/23 09:50 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 19:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			45862	02/09/23 09:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45763	02/08/23 10:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45729	02/09/23 00:54	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	45084	01/30/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1			45244	02/02/23 14:57	CH	EET MID

#### Client Sample ID: SS07

#### Date Collected: 01/25/23 10:00 Date Received: 01/26/23 14:33

Batch	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 20:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			45862	02/09/23 09:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45763	02/08/23 10:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45729	02/09/23 01:14	AJ	EET MID

Eurofins Carlsbad

Lab Sample ID: 890-3965-6

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-3965-7 Matrix: Solid

#### Lab Chronicle

Job ID: 890-3965-1 SDG: 03A1987062

Matrix: Solid

Matrix: Solid

Matrix: Solid

9

Lab Sample ID: 890-3965-7

Lab Sample ID: 890-3965-8

Lab Sample ID: 890-3965-9

#### **Client Sample ID: SS07** Date Collected: 01/25/23 10:00

Project/Site: North Brushy PW Line

Client: Ensolum

Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	45084	01/30/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1			45244	02/02/23 15:04	СН	EET MID

#### **Client Sample ID: SS08**

#### Date Collected: 01/25/23 10:10 Date Received: 01/26/23 14:33

Batch	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 20:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			45862	02/09/23 09:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45763	02/08/23 10:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45729	02/09/23 01:35	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	45086	01/30/23 16:02	KS	EET MID
Soluble	Analysis	300.0		1			45245	02/02/23 10:57	СН	EET MID

#### **Client Sample ID: SS09** Date Collected: 01/25/23 10:20

Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 21:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			45862	02/09/23 09:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	45763	02/08/23 10:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45729	02/09/23 01:55	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45086	01/30/23 16:02	KS	EET MID
Soluble	Analysis	300.0		1			45245	02/02/23 11:02	СН	EET MID

#### **Client Sample ID: SS10** Date Collected: 01/25/23 10:30

Lab Sample ID: 890-3965-10 Matrix: Solid

#### Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	45550	02/06/23 08:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45543	02/06/23 21:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45665	02/07/23 09:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			45862	02/09/23 09:45	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	45763	02/08/23 10:22	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45729	02/09/23 02:15	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	45086	01/30/23 16:02	KS	EET MID
Soluble	Analysis	300.0		1			45245	02/02/23 11:07	CH	EET MID

#### Lab Chronicle

Client: Ensolum Project/Site: North Brushy PW Line

Laboratory References:

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

Job ID: 890-3965-1 SDG: 03A1987062

Accreditation/Certification Summary

Job ID: 890-3965-1 SDG: 03A1987062

#### Laboratory: Eurofins Midland

Project/Site: North Brushy PW Line

Client: Ensolum

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

Authority		Program	Identification Number	Expiration Date	
xas	1	NELAP	T104704400-22-25	06-30-23	
The following analytes	are included in this report, I	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for w	
the agency does not o					
the agency does not o Analysis Method	ffer certification. Prep Method	Matrix	Analyte		
0,		Matrix Solid	Analyte Total TPH	· ·	

Eurofins Carlsbad

Project/Site: North Brushy PW Line

Client: Ensolum

#### Job ID: 890-3965-1 SDG: 03A1987062

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	EPA	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 Refe	rences:		
ASTM = A	STM International		
EPA = US	Environmental Protection Agency		
SW846 = '	'Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Ed	ition, 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

Eurofins Carlsbad

**Released to Imaging: 2/17/2025 2:02:20 PM** 

#### Sample Summary

Job ID: 890-3965-1
SDG: 03A1987062

ab Sample ID.	Client Sample ID	Matrix	Collected	Received	Depth
90-3965-1	SS01	Solid	01/25/23 09:00	01/26/23 14:33	0.5'
90-3965-2	SS02	Solid	01/25/23 09:10	01/26/23 14:33	0.5'
90-3965-3	SS03	Solid	01/25/23 09:20	01/26/23 14:33	0.5'
90-3965-4	SS04	Solid	01/25/23 09:30	01/26/23 14:33	0.5'
90-3965-5	SS05	Solid	01/25/23 09:40	01/26/23 14:33	0.5'
90-3965-6	SS06	Solid	01/25/23 09:50	01/26/23 14:33	0.5'
90-3965-7	SS07	Solid	01/25/23 10:00	01/26/23 14:33	0.5'
90-3965-8	SS08	Solid	01/25/23 10:10	01/26/23 14:33	0.5'
90-3965-9 90-3965-10	SS09 SS10	Solid Solid	01/25/23 10:20 01/25/23 10:30	01/26/23 14:33 01/26/23 14:33	0.5' 0.5'

	EL Pa Hobbs	iso, TX (915) s, NM (575) 3	585-3443, 192-7550, C	arfsbad, N	EL Paso, TX (915) 565-3443, Lubbock, TX (806) /94-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com	com Page 1 of 1
	Bill to: (if different)		Jim Raley			Work Ore	Work Order Comments
	Company Name				Progr	am: UST/PST   PRP   E	Program: UST/PST  PRP Brownfields RRC Superfund
Y	Address:		Buena V	sta Dr.	State	of Project:	
	City, State ZIP:	Carls	sbad, NM	88220	Repor	ting: Level II Level III	
Email	I: gmoreno@Ens	solum.com	, jim.ralev	@dvn.co			ADaPT D Other:
Tur	n Around				ANALY		Preservative Codes
Routine	🗆 Rush	Pres. Code					None: NO DI Water: H <sub>2</sub> O
Due Date:			_	-			Cool: Cool MeOH: Me
TAT starts th	he day received by			_			
the lab, if re	ceived by 4:30pm	rs			-		H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na
	NO NO			-			H <sub>3</sub> PO <sub>4</sub> : HP
nermometer ID:	FAM-007						NaHSO4: NABIS
orrection Factor:	E.C.						$Na_2S_2O_3$ : NaSO <sub>3</sub>
emperature Reading:	1.2	S (E		1	890-3965 Chain of Custody		Zn Acetate+NaOH: Zn
orrected Temperature	1.1.2	RIDE	015)	(802		-	NaUH+Ascorbic Acid: SAPC
Date Time sampled Sampled	Depth Grab/ Comp	# of Cont	ТРН (8	BTEX			Sample Comments
1.25.23 9:00	0.5' Grab/	1 X	×	×			
1.25.23 9:10	0.5' Grab/	1 ×	×	×			
1.25.23 9:20	0.5' Grab/	1 X	×	×			Incident ID
	0.5' Grab/	1 X	×	×			nAPP2231126594
1.25.23 9:40	0.5' Grab/	1 X	×	×			
1.25.23 9:50	0.5' Grab/	1 ×	×	×			
1.25.23 10:00	0.5' Grab/	1 ×	×	×			
1 25 23 10:10	0.5' Grab/	*	*	*			
1.25.23 10:20	0.5' Grab/	1 X	×	×			
1.25.23 10:30	0.5' Grab/	1 X	×	×			
8RCRA 13		A		B Cd	1	K Se /	D <sub>2</sub> Na Sr TI Sn U V Zn
	SPLP 6010: 8R	11		Se Ca C			rig. 10317 243. 17 1470 7 7471
samples constitutes a valu f samples and shall not as plied to each project and a	d purchase order from ssume any responsibition of \$5 for each	n client compa lity for any los h sample subn	any to Eurof uses or expe	ns Xenco, il nses incurr ofins Xenco	ts affiliates and subcontractors. It assigned by the cilent if such losses are due to by the cilent if such losses terms will be e.t.	ns standard terms and condition circumstances beyond the cont nforced unless previously nego	ns Irrol Nated.
Received by: (Sign	hature)	Dat	e/Time			Received by: (Sig	nature) Date/Time
2		Ľ			- 1		
15	ud	N	8	725			
				0			
	Company Name:     Ensolum       Address:     3122 National Parks HWY       Clty, State ZIP:     Carlsbad, NM 88220       Project Name:     North Brushy PW Line     Tu       Project Number:     03A1987062     Routine       Sampler's Name:     Gilbert Moreno     Tat starst       CC #:     9001900347     Due Date:       Samples Received Intact:     Yes     No       Coller Custody Seals:     Yes     No       Sample Identification     Matrix     Sampled       Sample Identification     Matrix     Sampled       SS06     S     01.25.23     9:00       SS07     S     01.25.23     9:00       SS08     S     01.25.23     9:00       SS09     S     01.25.23     9:20       SS09     S     01.25.23     9:20       SS09     S     01.25.23     9:20       SS09     S     01.25.23     10:20       SS09     S     01.25.23 <td>Company Name:     Ensolum     Company Name:     Company Name:     Company Name:     Company Name       Address:     3122 National Parks HWY     Address:     Address:     Address:       Project Name:     North Brushy PW Line     Tum Around       Project Name:     North Brushy PW Line     Tum Around       Project Name:     G03-1987/062     Brushe     Due Date:     Sum Around       Project Number:     G03-1987/062     Tegap Blank:     Cvs. No     Thermometer ID:     Tut M007       Corier Custody Seals:     Yes     No     Thermometer ID:     Tut M007       Sample Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Solorier Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Sample Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Solorier Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Solorier Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Solorier Custody Seals:     Yes     No     Solorier Containers:     Solorier Scale     Solorier Scale</td> <td>Image: Nover State State</td> <td>N     Company Name:     WPX       Address:     5315 Buena Vi       Email:     gmoreno@Ensolum.com, jim.rale       Turn Around     Pres.       Due Date:     5 Day TAT       TAT starts the day received by     ine tab, if received by 4.30pm       nemoreature     Cip. No       Net Loe:     Cip. No       Due Date:     5 Day TAT       TAT starts the day received by     ine tab, if received by 4.30pm       remperature     Cip. No       nemoneter ID:     TAMOOT       orrection Factor:     TA_A       125.23     9:00       0.5'     Grab/       125.23     9:30       0.5'     Grab/       125.23     9:30       0.5'     Grab/       125.23     9:30       0.5'     Grab/       125.23     9:30       125.23     9:30       125.23     10:20       0.5'     Grab/       125.23     10:20       0.5'     Grab/       125.23     10:20       0.5'     Grab/       1.25.23     10:20       0.5'     Grab/       1     X       1.25.23     10:20       1.25.23     1.1       1.25.23</td> <td>N       Company Name:       WPX         Address:       S15 Buena Vista Dr.         City, State ZIP:       Carisbad, NM 88220         Email:       gmoreing@Ensolum.com, jm.ralev@dvn.com, jm.ralev@dvn.</td> <td>Image: Name:     VPX     Address:     S315 Buena Vista Dr.     Programs       Email:     Gmoreno@Ensolum.com.jim.ralev@dvn.com     Email:     Gmoreno@Ensolum.com.jim.ralev@dvn.com     Babera       Image: I</td> <td>Name:     WPX       5315 Buena Vista Dr.       @Ensolum.com, jim raley@dvn.com       @Ensolum.com, jim raley@dvn.com       @Ensolum.com, jim raley@dvn.com       @Ensolum.com, jim raley@dvn.com       Code       Code<!--</td--></td>	Company Name:     Ensolum     Company Name:     Company Name:     Company Name:     Company Name       Address:     3122 National Parks HWY     Address:     Address:     Address:       Project Name:     North Brushy PW Line     Tum Around       Project Name:     North Brushy PW Line     Tum Around       Project Name:     G03-1987/062     Brushe     Due Date:     Sum Around       Project Number:     G03-1987/062     Tegap Blank:     Cvs. No     Thermometer ID:     Tut M007       Corier Custody Seals:     Yes     No     Thermometer ID:     Tut M007       Sample Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Solorier Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Sample Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Solorier Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Solorier Custody Seals:     Yes     No     Temperature:     Image and reserved by 3.30m       Solorier Custody Seals:     Yes     No     Solorier Containers:     Solorier Scale     Solorier Scale	Image: Nover State	N     Company Name:     WPX       Address:     5315 Buena Vi       Email:     gmoreno@Ensolum.com, jim.rale       Turn Around     Pres.       Due Date:     5 Day TAT       TAT starts the day received by     ine tab, if received by 4.30pm       nemoreature     Cip. No       Net Loe:     Cip. No       Due Date:     5 Day TAT       TAT starts the day received by     ine tab, if received by 4.30pm       remperature     Cip. No       nemoneter ID:     TAMOOT       orrection Factor:     TA_A       125.23     9:00       0.5'     Grab/       125.23     9:30       0.5'     Grab/       125.23     9:30       0.5'     Grab/       125.23     9:30       0.5'     Grab/       125.23     9:30       125.23     9:30       125.23     10:20       0.5'     Grab/       125.23     10:20       0.5'     Grab/       125.23     10:20       0.5'     Grab/       1.25.23     10:20       0.5'     Grab/       1     X       1.25.23     10:20       1.25.23     1.1       1.25.23	N       Company Name:       WPX         Address:       S15 Buena Vista Dr.         City, State ZIP:       Carisbad, NM 88220         Email:       gmoreing@Ensolum.com, jm.ralev@dvn.com, jm.ralev@dvn.	Image: Name:     VPX     Address:     S315 Buena Vista Dr.     Programs       Email:     Gmoreno@Ensolum.com.jim.ralev@dvn.com     Email:     Gmoreno@Ensolum.com.jim.ralev@dvn.com     Babera       Image: I	Name:     WPX       5315 Buena Vista Dr.       @Ensolum.com, jim raley@dvn.com       @Ensolum.com, jim raley@dvn.com       @Ensolum.com, jim raley@dvn.com       @Ensolum.com, jim raley@dvn.com       Code       Code </td

#### Received by OCD: 4/15/2024 2:04:17 PM

13

Chain of Custody Houston, TX (281) 240-4200. Dallas, TX (214) 902-0300

# **eurofins**

Page 95 of 540

Released to Imaging: 2/17/2025 2:02:20 PM

Work Order No:

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3965 List Number: 1 Creator: Stutzman, Amanda

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	

Job Number: 890-3965-1 SDG Number: 03A1987062

#### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 3965 List Number: 2 Creator: Rodriguez, Leticia

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	N/A	

Job Number: 890-3965-1 SDG Number: 03A1987062

List Source: Eurofins Midland List Creation: 01/30/23 09:34 AM

Received by OCD: 4/15/2024 2:04:17 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Devon Team Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 2/10/2023 11:58:57 AM

## JOB DESCRIPTION

North Brushy PW Line SDG NUMBER 03A1987062

## **JOB NUMBER**

890-3964-1

See page two for job notes and contact information

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



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Received by OCD: 4/15/2024 2:04:17 PM

1

## **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

RAMER

Generated 2/10/2023 11:58:57 AM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Laboratory Job ID: 890-3964-1 SDG: 03A1987062

## Table of Contents

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Method Summary	28
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	30
Receipt Checklists	31

Surrogate recovery exceeds control limits, low biased.

Indicates the analyte was analyzed for but not detected.

	Deminions/Glossary	
Client: Enso Project/Site	Ium Job ID: 890-3964-1 North Brushy PW Line SDG: 03A1987062	2
Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	4
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	5

#### GC Semi VOA

F1 F2 S1-

U

GC Selli VU	A	
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		8
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	9
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	4.0
CNF	Contains No Free Liquid	13
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	

#### 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

4

#### Job ID: 890-3964-1 SDG: 03A1987062

#### Job ID: 890-3964-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

Project/Site: North Brushy PW Line

#### Narrative

Job Narrative 890-3964-1

#### Receipt

The samples were received on 1/26/2023 2:33 PM. 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 1.0°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-3964-1), BH02 (890-3964-2), BH03 (890-3964-3), BH04 (890-3964-4), BH05 (890-3964-5), BH06 (890-3964-6), BH07 (890-3964-7), BH08 (890-3964-8) and BH09 (890-3964-9).

#### GC VOA

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

#### GC Semi VOA

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-45078 and 880-45078 and analytical batch 880-45243 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-45086 and analytical batch 880-45245 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

RL

0.00202

0.00202

0.00202

0.00403

0.00202

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

02/06/23 13:17

02/06/23 13:17

02/06/23 13:17

02/06/23 13:17

02/06/23 13:17

Job ID: 890-3964-1 SDG: 03A1987062

#### **Client Sample ID: BH01**

Project/Site: North Brushy PW Line

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

Result Qualifier

<0.00202 U F1

<0.00202 UF1

<0.00202 UF1

<0.00403 UF1

<0.00202 UF1

Date Collected: 01/25/23 10:40 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Lab Sample ID: 890-3964-1

Analyzed

02/07/23 15:28

02/07/23 15:28

02/07/23 15:28

02/07/23 15:28

02/07/23 15:28

Matrix: Solid

Dil Fac

1

1

1

1

1

5

5		• • •							
Xylenes, Total	<0.00403	U F1	0.00403		mg/Kg		02/06/23 13:17	02/07/23 15:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130				02/06/23 13:17	02/07/23 15:28	1
1,4-Difluorobenzene (Surr)	84		70 - 130				02/06/23 13:17	02/07/23 15:28	1
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			02/08/23 11:09	1
- Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (0	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/10/23 10:33	1
- Method: SW846 8015B NM - Dies	el Range Orga	nics (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		02/07/23 09:21	02/10/23 01:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 01:27	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 01:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130				02/07/23 09:21	02/10/23 01:27	1
o-Terphenyl	91		70 - 130				02/07/23 09:21	02/10/23 01:27	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Soluble	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	274		4.96		mg/Kg			02/02/23 09:36	1
Client Sample ID: BH02							Lab Sar	nple ID: 890-	3964-2
Date Collected: 01/25/23 10:50								Matri	ix: Solid
ate Received: 01/26/23 14:33									
ample Depth: 0.5'									
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)	I.						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/06/23 13:17	02/07/23 15:55	1

-					•	•	
Benzene	< 0.00199	U	0.00199	mg/Kg	02/06/23 13:17	02/07/23 15:55	1
Toluene	<0.00199	U	0.00199	mg/Kg	02/06/23 13:17	02/07/23 15:55	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg	02/06/23 13:17	02/07/23 15:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg	02/06/23 13:17	02/07/23 15:55	1
o-Xylene	<0.00199	U	0.00199	mg/Kg	02/06/23 13:17	02/07/23 15:55	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg	02/06/23 13:17	02/07/23 15:55	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130		02/06/23 13:17	02/07/23 15:55	1

**Eurofins Carlsbad** 

Released to Imaging: 2/17/2025 2:02:20 PM

#### **Client Sample Results**

Job ID: 890-3964-1 SDG: 03A1987062

Lab Sample ID: 890-3964-2

Lab Sample ID: 890-3964-3

Matrix: Solid

#### **Client Sample ID: BH02**

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 10:50 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

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

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	91		70 - 130				02/06/23 13:17	02/07/23 15:55	1
- Method: TAL SOP Total BTEX -	- Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/08/23 11:09	1
Method: SW846 8015 NM - Dies				MDI	Unit	<b>_</b>	Bronorod	Analyzed	
Method: SW846 8015 NM - Dies	sel Range Organ	ics (DRO) (	GC)						
Method: SW846 8015 NM - Dies Analyte Total TPH		Qualifier	GC) 	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 02/10/23 10:33	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Di	Result <49.9	Qualifier	RL 49.9		mg/Kg		<u>.</u>	02/10/23 10:33	1
Analyte Total TPH	Result <49.9	Qualifier U	<b>RL</b> 49.9			D	Prepared		Dil Fac 1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Di	Result <49.9	Qualifier U Inics (DRO) Qualifier	RL 49.9		mg/Kg		<u>.</u>	02/10/23 10:33	1
Analyte Total TPH Method: SW846 8015B NM - Di Analyte	Result esel Range Orga Result	Qualifier U Inics (DRO) Qualifier	(GC)		mg/Kg Unit		Prepared	02/10/23 10:33 Analyzed	1

C10-C28) Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg	02/07/23 09:21	02/10/23 02:12	
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fa
1-Chlorooctane	82		70 - 130		02/07/23 09:21	02/10/23 02:12	
o-Terphenyl	90		70 - 130		02/07/23 09:21	02/10/23 02:12	

#### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	[	D	Prepared	Analyzed	Dil Fac
Chloride	13100		100		mg/Kg				02/02/23 09:54	20

#### **Client Sample ID: BH03**

Date Collected: 01/25/23 11:00 Date Received: 01/26/23 14:33 Sample Depth: 0.5'

#### Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Benzene <0.00198 U 0.00198 mg/Kg 02/06/23 13:17 02/07/23 16:21 Toluene <0.00198 U 0.00198 02/06/23 13:17 02/07/23 16:21 mg/Kg 1 Ethylbenzene <0.00198 U 0.00198 mg/Kg 02/06/23 13:17 02/07/23 16:21 0.00396 mg/Kg 02/06/23 13:17 02/07/23 16:21 m-Xylene & p-Xylene <0.00396 U 1 o-Xylene <0.00198 U 0.00198 mg/Kg 02/06/23 13:17 02/07/23 16:21 1 Xylenes, Total <0.00396 U 0.00396 mg/Kg 02/06/23 13:17 02/07/23 16:21 1 %Recovery Surrogate Qualifier Limits Prepared Dil Fac Analvzed 70 - 130 02/06/23 13:17 4-Bromofluorobenzene (Surr) 97 02/07/23 16:21 1 1,4-Difluorobenzene (Surr) 97 70 - 130 02/06/23 13:17 02/07/23 16:21 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL MDL Unit D Dil Fac Prepared Analyzed Total BTEX <0.00396 Ū 0.00396 mg/Kg 02/08/23 11:09 1 Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 02/10/23 10:33 Total TPH <49.9 U 49.9 mg/Kg 1

9	02/10/20	10.00		
	_	-	-	

**Eurofins Carlsbad** 

Matrix: Solid

Job ID: 890-3964-1 SDG: 03A1987062

Lab Sample ID: 890-3964-4

Matrix: Solid

#### **Client Sample ID: BH03**

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 11:00 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 02:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 02:35	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 02:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130				02/07/23 09:21	02/10/23 02:35	1
o-Terphenyl	92		70 - 130				02/07/23 09:21	02/10/23 02:35	1

#### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1760	25.0	mg/Kg			02/02/23 10:01	5

#### **Client Sample ID: BH04**

#### Date Collected: 01/25/23 11:10 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 16:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 16:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 16:48	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/06/23 13:17	02/07/23 16:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 16:48	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/06/23 13:17	02/07/23 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				02/06/23 13:17	02/07/23 16:48	1
1,4-Difluorobenzene (Surr)	101		70 - 130				02/06/23 13:17	02/07/23 16:48	1

liyte	Result	Quaimer			0	Flepaleu	Analyzeu	Dirrac
I BTEX	<0.00399	U	0.00399	mg/Kg			02/08/23 11:09	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			02/10/23 10:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 02:57	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 02:57	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 02:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				02/07/23 09:21	02/10/23 02:57	1
o-Terphenyl	99		70 _ 130				02/07/23 09:21	02/10/23 02:57	1

Lab Sample ID: 890-3964-3

Matrix: Solid

#### **Client Sample Results**

		Chem	Sample R	esuits					
Client: Ensolum								Job ID: 890	
Project/Site: North Brushy PW Line								SDG: 03A	1987062
Client Sample ID: BH04							Lab Sar	nple ID: 890-	3964-4
Date Collected: 01/25/23 11:10								-	ix: Solid
Date Received: 01/26/23 14:33									
Sample Depth: 0.5'									
-									
Method: EPA 300.0 - Anions, Ion	• •	•				_	- ·		
Analyte Chloride		Qualifier	RL 49.5	MDL		D	Prepared	Analyzed 02/02/23 10:07	
	7510		49.5		mg/Kg			02/02/23 10:07	
Client Sample ID: BH05							Lab Sar	nple ID: 890-	3964-5
Date Collected: 01/25/23 11:20								Matri	ix: Solid
Date Received: 01/26/23 14:33									
Sample Depth: 0.5'									
_ Method: SW846 8021B - Volatile 0	)rganic Comp	ounds (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/06/23 13:17	02/07/23 21:13	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/06/23 13:17	02/07/23 21:13	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/06/23 13:17	02/07/23 21:13	
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/06/23 13:17	02/07/23 21:13	• • • • • • •
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/06/23 13:17	02/07/23 21:13	
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/06/23 13:17	02/07/23 21:13	
Suma mata	9/ Decovery	Qualifier	Limite				Duanawad	Analyzad	
Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 105	Qualifier	Limits 70 - 130				Prepared 02/06/23 13:17	Analyzed 02/07/23 21:13	
1,4-Difluorobenzene (Surr)	95		70 - 130 70 - 130				02/06/23 13:17	02/07/23 21:13	
	50		10-100				02/00/20 10:17	02/01/20 21:10	
Method: TAL SOP Total BTEX - To	otal BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/08/23 11:09	1
_ Method: SW846 8015 NM - Diesel	Panga Organ		ור						
Analyte		Qualifier	-) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9		49.9		mg/Kg			02/10/23 10:33	1
-					0 0				
Method: SW846 8015B NM - Diese	el Range Orga	nics (DRO) (O	GC)						
Analyte	Result		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 03:19	
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	ш	49.9		mg/Kg		02/07/23 09:21	02/10/23 03:19	
C10-C28)	~+3.5	~	-10.0		y		52/01/20 00.2 I	52/10/20 00.13	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 03:19	
Surrogata	0/ D	Qualifica	Limite				Bronewood	Analizzad	D# F-
Surrogate 1-Chlorooctane	<b>%Recovery</b> 100	uanner	Limits 70 - 130				Prepared 02/07/23 09:21	Analyzed 02/10/23 03:19	Dil Fac
o-Terphenyl	100		70 - 130 70 - 130				02/07/23 09:21	02/10/23 03:19	
- -	103		10 - 130				52/01/25 09.21	02/10/20 00.19	
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Job ID: 890-3964-1 SDG: 03A1987062

#### **Client Sample ID: BH06**

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 11:30 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

## Lab Sample ID: 890-3964-6

Matrix: Solid

Method: SW846 8021B - Volatile C	Organic Comp	ounds (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 21:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 21:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 21:40	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/06/23 13:17	02/07/23 21:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 21:40	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/06/23 13:17	02/07/23 21:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130				02/06/23 13:17	02/07/23 21:40	1
1,4-Difluorobenzene (Surr)	99		70 - 130				02/06/23 13:17	02/07/23 21:40	1
Method: TAL SOP Total BTEX - To	tal BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/08/23 11:09	1
Method: SW846 8015 NM - Diesel	Range Organ	ics (DRO) (G	C)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/10/23 10:33	1
Method: SW846 8015B NM - Diese	el Range Orga	nics (DRO) (	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 03:42	1
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 03:42	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 03:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130				02/07/23 09:21	02/10/23 03:42	1
p-Terphenyl	89		70 - 130				02/07/23 09:21	02/10/23 03:42	1
Method: EPA 300.0 - Anions, Ion C		-							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8570		49.7		mg/Kg			02/02/23 10:19	10
lient Sample ID: BH07							Lab San	nple ID: 890-	
ate Collected: 01/25/23 11:40								Matri	x: Solid
ate Received: 01/26/23 14:33									
ample Depth: 0.5'									
Method: SW846 8021B - Volatile C	• •								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199		0.00199		mg/Kg		02/06/23 13:17	02/07/23 22:07	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/06/23 13:17	02/07/23 22:07	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/06/23 13:17	02/07/23 22:07	1
n-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/06/23 13:17	02/07/23 22:07	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/06/23 13:17	02/07/23 22:07	1
J-Aylerie									
-	<0.00398	U	0.00398		mg/Kg		02/06/23 13:17	02/07/23 22:07	1
Xylenes, Total Surrogate	<0.00398 %Recovery		0.00398 <i>Limits</i>		mg/Kg		02/06/23 13:17 <b>Prepared</b>	02/07/23 22:07 Analyzed	1 Dil Fac

#### **Client Sample Results**

Job ID: 890-3964-1 SDG: 03A1987062

Matrix: Solid

5

Lab Sample ID: 890-3964-7

Lab Sample ID: 890-3964-8

Matrix: Solid

#### Client Sample ID: BH07

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 11:40 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

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

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	98		70 - 130				02/06/23 13:17	02/07/23 22:07	
Method: TAL SOP Total BTEX - 1	otal BTEX Calo	ulation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/08/23 11:09	
Method: SW846 8015 NM - Diese	Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
					malla			02/10/23 10:33	
Total TPH : Method: SW846 8015B NM - Dies	<49.9 sel Range Orga		49.9 (GC)		mg/Kg			02/10/23 10.33	
					mg/Kg			02/10/23 10:33	
	sel Range Orga			MDL	Unit	D	Prepared	Analyzed	Dil Fa
Method: SW846 8015B NM - Dies Analyte	sel Range Orga	nics (DRO) Qualifier	(GC)	MDL		<u>D</u>	Prepared 02/07/23 09:21		Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	el Range Orga Result <49.9	nics (DRO) Qualifier	(GC) <u>RL</u> 49.9	MDL	Unit mg/Kg	<u>D</u>	02/07/23 09:21	Analyzed 02/10/23 04:05	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	sel Range Orga Result	nics (DRO) Qualifier	(GC)	MDL	Unit	<u>D</u>	<u> </u>	Analyzed	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result <49.9 <49.9	nics (DRO) Qualifier U	(GC) <u>RL</u> 49.9 49.9	MDL	Unit mg/Kg mg/Kg	<u>D</u>	02/07/23 09:21	Analyzed 02/10/23 04:05 02/10/23 04:05	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Orga Result <49.9	nics (DRO) Qualifier U	(GC) <u>RL</u> 49.9	MDL	Unit mg/Kg	<u> </u>	02/07/23 09:21	Analyzed 02/10/23 04:05	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	sel Range Orga Result <49.9 <49.9	nics (DRO) Qualifier U U	(GC) <u>RL</u> 49.9 49.9	MDL	Unit mg/Kg mg/Kg	D	02/07/23 09:21	Analyzed 02/10/23 04:05 02/10/23 04:05	Dil Fa
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36)	sel Range Orga Result <49.9 <49.9 <49.9	nics (DRO) Qualifier U U	(GC) <u>RL</u> 49.9 49.9 49.9	MDL	Unit mg/Kg mg/Kg	<u> </u>	02/07/23 09:21 02/07/23 09:21 02/07/23 09:21	Analyzed 02/10/23 04:05 02/10/23 04:05 02/10/23 04:05	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	4810	50.0	mg/Kg			02/02/23 10:25	10		

#### Client Sample ID: BH08

Date Collected: 01/25/23 11:50 Date Received: 01/26/23 14:33 Sample Depth: 0.5'

#### 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 02/06/23 13:17 02/07/23 22:33 Toluene <0.00199 U 0.00199 02/06/23 13:17 02/07/23 22:33 mg/Kg 1 Ethylbenzene <0.00199 U 0.00199 mg/Kg 02/06/23 13:17 02/07/23 22:33 02/07/23 22:33 m-Xylene & p-Xylene <0.00398 U 0.00398 mg/Kg 02/06/23 13:17 1 o-Xylene <0.00199 U 0.00199 mg/Kg 02/06/23 13:17 02/07/23 22:33 1 Xylenes, Total <0.00398 U 0.00398 mg/Kg 02/06/23 13:17 02/07/23 22:33 1 %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analvzed 70 - 130 02/06/23 13:17 4-Bromofluorobenzene (Surr) 110 02/07/23 22:33 1 1,4-Difluorobenzene (Surr) 99 70 - 130 02/06/23 13:17 02/07/23 22:33 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL MDL Unit D Dil Fac Prepared Analyzed Total BTEX <0.00398 Ū 0.00398 02/08/23 11:09 mg/Kg 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 02/10/23 10:33 1

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Job ID: 890-3964-1 SDG: 03A1987062

Lab Sample ID: 890-3964-8

Lab Sample ID: 890-3964-9

Matrix: Solid

## **Client Sample ID: BH08**

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 11:50 Date Received: 01/26/23 14:33

Sample Depth: 0.5'

Client: Ensolum

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 04:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 04:27	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/10/23 04:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130				02/07/23 09:21	02/10/23 04:27	1
o-Terphenyl	92		70 - 130				02/07/23 09:21	02/10/23 04:27	1

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7070	49.6		mg/Kg			02/02/23 10:31	10

#### **Client Sample ID: BH09**

## Date Collected: 01/25/23 12:00

Date Received: 01/26/23 14:33 Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 23:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 23:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 23:00	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/06/23 13:17	02/07/23 23:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/23 13:17	02/07/23 23:00	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/06/23 13:17	02/07/23 23:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130				02/06/23 13:17	02/07/23 23:00	1
1,4-Difluorobenzene (Surr)	90		70 - 130				02/06/23 13:17	02/07/23 23:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	 D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg	 		02/08/23 11:09	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			02/10/23 10:33	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		02/07/23 09:21	02/10/23 04:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		02/07/23 09:21	02/10/23 04:49	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/07/23 09:21	02/10/23 04:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				02/07/23 09:21	02/10/23 04:49	1
o-Terphenyl	97		70 - 130				02/07/23 09:21	02/10/23 04:49	1

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Matrix: Solid

		Client S	ample R	esults	5					1
Client: Ensolum Project/Site: North Brushy PW Line								Job ID: 890 SDG: 03A1		2
Client Sample ID: BH09 Date Collected: 01/25/23 12:00							Lab Sa	mple ID: 890- Matri	3964-9 x: Solid	3
Date Received: 01/26/23 14:33 Sample Depth: 0.5'										4
Method: EPA 300.0 - Anions, Ion Chr Analyte		<b>bhy - Soluble</b> Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	5
Chloride	8660		100		mg/Kg		Trepureu	02/02/23 10:43	20	6
										7
										8
										9
										10
										11
										12
										13
										14

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Client: Ensolum Project/Site: North Brushy PW Line

#### Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

_				
		BFB1	DFBZ1	I
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	J)
880-24295-A-20-D MSD	Matrix Spike Duplicate	85	90	
890-3964-1	BH01	85	84	
890-3964-1 MS	BH01	0 S1-	0 S1-	
890-3964-2	BH02	91	91	
890-3964-3	BH03	97	97	
890-3964-4	BH04	104	101	
890-3964-5	BH05	105	95	
890-3964-6	BH06	113	99	
890-3964-7	BH07	111	98	
890-3964-8	BH08	110	99	
890-3964-9	BH09	110	90	
LCS 880-45605/1-A	Lab Control Sample	87	90	
LCS 880-45701/1-A	Lab Control Sample	102	99	
LCSD 880-45605/2-A	Lab Control Sample Dup	104	102	
LCSD 880-45701/2-A	Lab Control Sample Dup	109	106	
MB 880-45605/5-A	Method Blank	70	87	
Surrogate Legend				
BFB = 4-Bromofluoroben:	zene (Surr)			
	(2)			

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

Percent Surrogate Recovery (Acceptance Limits) 1CO1 OTPH1 Lab Sample ID **Client Sample ID** (70-130) (70-130) 890-3961-A-7-D MS Matrix Spike 109 94 890-3961-A-7-E MSD Matrix Spike Duplicate 123 103 890-3964-1 BH01 91 84 BH02 82 890-3964-2 90 890-3964-3 BH03 85 92 890-3964-4 BH04 96 99 890-3964-5 BH05 100 103 BH06 890-3964-6 82 89 890-3964-7 BH07 82 88 BH08 890-3964-8 85 92 890-3964-9 BH09 94 97 LCS 880-45658/2-A 105 105 Lab Control Sample LCSD 880-45658/3-A Lab Control Sample Dup 95 98 MB 880-45658/1-A Method Blank 124 126

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Page 111 of 540

Job ID: 890-3964-1 SDG: 03A1987062

Prep Type: Total/NA

Prep Type: Total/NA

Client: Ensolum

## Project/Site: North Brushy PW Line

Lab Sample ID: MB 880-45605/5-	A									Client Sa	ample ID: N	lethod	Blank
Matrix: Solid											Prep Ty	vpe: To	otal/N/
Analysis Batch: 45647											Prep	Batch:	4560
		MB MB											
Analyte		ult Qualit		RL	MDL	Unit		D		epared	Analyze		Dil Fa
Benzene	<0.002			0200		mg/Kg				6/23 13:17	02/07/23 1		
Foluene	<0.002			0200		mg/Kg				5/23 13:17	02/07/23 1		
Ethylbenzene	<0.002			0200		mg/Kg				5/23 13:17	02/07/23 1		
n-Xylene & p-Xylene		400 U		0400		mg/Kg				5/23 13:17	02/07/23 1		
-Xylene	<0.002			0200		mg/Kg				5/23 13:17	02/07/23 1		
Kylenes, Total	<0.004	400 U	0.0	0400		mg/Kg			02/06	6/23 13:17	02/07/23 1	5:02	
		МВ МВ											
Surrogate	%Recov	ery Quali	fier Limit	s					Pi	repared	Analyze	d	Dil Fa
-Bromofluorobenzene (Surr)		70	70 - 1	30					02/0	6/23 13:17	02/07/23 1	5:02	
1,4-Difluorobenzene (Surr)		87	70 - 1	30					02/0	6/23 13:17	02/07/23 1	5:02	1
ab Sample ID: LCS 880-45605/1	I-A							С	lient	Sample	ID: Lab Co	ntrol S	ample
Matrix: Solid											Prep Ty	vpe: To	otal/NA
Analysis Batch: 45647												Batch:	4560
			Spike	LCS	LCS						%Rec		
Analyte			Added	Result		lifier	Unit		D	%Rec	Limits		
Benzene			0.100	0.09023			mg/Kg			90	70 - 130		
Toluene			0.100	0.08757			mg/Kg			88	70 - 130		
thylbenzene			0.100	0.08803			mg/Kg			88	70 - 130		
n-Xylene & p-Xylene			0.200	0.1672			mg/Kg			84	70 - 130		
-Xylene			0.100	0.08513			mg/Kg			85	70 - 130		
Surrogate	LCS I %Recovery (	_CS Qualifier	Limits										
4-Bromofluorobenzene (Surr)	87		70 - 130										
1,4-Difluorobenzene (Surr)	90		70 - 130										
Lab Sample ID: LCSD 880-45605	6/2-A						Cli	ent	Sam	ple ID: L	ab Control	Samp	le Dup
Matrix: Solid											Prep Ty	vpe: To	otal/NA
Analysis Batch: 45647											Prep	Batch:	45605
			Spike	LCSD	LCS	D					%Rec		RPD
Analyte			Added	Result		lifier	Unit		<u>D</u>	%Rec	Limits	RPD	Limi
Benzene			0.100	0.1189			mg/Kg			119	70 - 130	27	35
Foluene			0.100	0.1144			mg/Kg			114	70 - 130	27	35
Ethylbenzene			0.100	0.1125			mg/Kg			113	70 - 130	24	3
n-Xylene & p-Xylene			0.200	0.2197			mg/Kg			110	70 - 130	27	35
p-Xylene			0.100	0.1074			mg/Kg			107	70 - 130	23	35
Surrogate	LCSD I %Recovery (	.CSD Qualifier	Limits										
4-Bromofluorobenzene (Surr)	104		70 - 130										
1,4-Difluorobenzene (Surr)	102		70 - 130										
Lab Sample ID: 890-3964-1 MS											Client Sam	ple ID	: BH01
Matrix: Solid											Prep Ty	vpe: To	otal/NA
Analysis Batch: 45647												Batch:	
	Sample S	Sample	Spike	MS	MS						%Rec		
Analyte	Result (	Qualifier	Added	Rosult	Qua	lifior	Unit		р	%Rec	Limits		

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00202	U F1	0.101	<0.00202	U F1	mg/Kg		0	70 - 130
Toluene	<0.00202	U F1	0.101	<0.00202	U F1	mg/Kg		0	70 - 130

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MS MS

<0.00202 U F1

<0.00404 U F1

<0.00202 UF1

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

D

%Rec

0

0

0

Spike

Added

0.101

0.202

0.101

Limits

70 - 130

70 - 130

Client: Ensolum Project/Site: North Brushy PW Line

Lab Sample ID: 890-3964-1 MS

Analysis Batch: 45647

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

<0.00202 U F1

<0.00403 UF1

<0.00202 UF1

MS MS

0 S1-

0 S1-

%Recovery Qualifier

Result Qualifier

**Client Sample ID: BH01** 

Prep Type: Total/NA

Prep Batch: 45605

5
7
8
9

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45701

Client Sample ID: Lab Control Sample Dup

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Prep Batch: 45701

%Rec

Limits

70 - 130

70 - 130

70 - 130

Matrix: Solid Analysis Batch: 45647

Lab Sample ID: LCS 880-45701/1-A

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Spike	LCS	LCS				%Rec	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
0.100	0.09865		mg/Kg		99	70 - 130	
0.100	0.1028		mg/Kg		103	70 - 130	
0.100	0.1034		mg/Kg		103	70 - 130	
0.200	0.2026		mg/Kg		101	70 - 130	
0.100	0.1052		mg/Kg		105	70 - 130	
	Added 0.100 0.100 0.100 0.200	Added         Result           0.100         0.09865           0.100         0.1028           0.100         0.1034           0.200         0.2026	Added         Result         Qualifier           0.100         0.09865         -           0.100         0.1028         -           0.100         0.1034         -           0.200         0.2026         -	Added         Result         Qualifier         Unit           0.100         0.09865         mg/Kg           0.100         0.1028         mg/Kg           0.100         0.1034         mg/Kg           0.200         0.2026         mg/Kg	Added         Result         Qualifier         Unit         D           0.100         0.09865         mg/Kg           0.100         0.1028         mg/Kg           0.100         0.1034         mg/Kg           0.200         0.2026         mg/Kg	Added         Result         Qualifier         Unit         D         %Rec           0.100         0.09865         mg/Kg         99           0.100         0.1028         mg/Kg         103           0.100         0.1034         mg/Kg         103           0.200         0.2026         mg/Kg         101	Added         Result         Qualifier         Unit         D         %Rec         Limits           0.100         0.09865         mg/Kg         99         70 - 130           0.100         0.1028         mg/Kg         103         70 - 130           0.100         0.1034         mg/Kg         103         70 - 130           0.200         0.2026         mg/Kg         101         70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

#### Lab Sample ID: LCSD 880-45701/2-A Matrix: Solid Analysis Batch: 45647

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09512		mg/Kg		95	70 - 130	4	35
Toluene	0.100	0.09897		mg/Kg		99	70 - 130	4	35
Ethylbenzene	0.100	0.09794		mg/Kg		98	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1919		mg/Kg		96	70 - 130	5	35
o-Xylene	0.100	0.09964		mg/Kg		100	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

#### Lab Sample ID: 880-24295-A-20-D MSD Matrix: Solid

Ana	vsis	Batch:	45647
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Batom	

Analysis Batch: 45647									Prep	rep Batch: 45701	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U F2 F1	0.100	0.05345	F1 F2	mg/Kg		53	70 - 130	64	35
Toluene	<0.00198	U F2 F1	0.100	0.04746	F1 F2	mg/Kg		47	70 - 130	66	35
Ethylbenzene	<0.00198	U F2 F1	0.100	0.04996	F1 F2	mg/Kg		50	70 - 130	62	35
m-Xylene & p-Xylene	<0.00396	U F2 F1	0.201	0.1010	F1 F2	mg/Kg		50	70 - 130	59	35
o-Xylene	<0.00198	U F2 F1	0.100	0.05396	F1 F2	mg/Kg		54	70 - 130	57	35

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Prep Type: Total/NA

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Project/Site: North Brushy PW Line

Client: Ensolum

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### Job ID: 890-3964-1 SDG: 03A1987062

Prep Type: Total/NA

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

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

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

Lab Sample ID: MB 880-45658/1- Matrix: Solid Analysis Batch: 45831	А	МВ					Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	otal/NA
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/09/23 20:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/09/23 20:17	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/09/23 20:17	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130				02/07/23 09:21	02/09/23 20:17	1
o-Terphenyl	126		70 - 130				02/07/23 09:21	02/09/23 20:17	1
Lab Sample ID: LCS 880-45658/2	-A					С	lient Sample I	D: Lab Control	Sample

#### Lab Sample ID: LCS 880-45658/2-A Matrix: Solid

Analysis Batch: 45831							Prep	Batch: 456	58
	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	885.3		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)	1000	909.8		mg/Kg		91	70 - 130		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	105		70 - 130

#### Lab Sample ID: LCSD 880-45658/3-A Matrix: Solid

Matrix: Solid Analysis Batch: 45831						-		Type: To Batch:	
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	871.4		mg/Kg		87	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	824.8		mg/Kg		82	70 - 130	10	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	98		70 - 130

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Client Sample ID: Lab Control Sample Dup

MS MS

902.9

867.4

Result Qualifier

Unit

mg/Kg

mg/Kg

D

%Rec

88

77

Spike

Added

999

999

Limits 70 - 130

70 - 130

Client: Ensolum Project/Site: North Brushy PW Line

Lab Sample ID: 890-3961-A-7-D MS

Matrix: Solid

(GRO)-C6-C10

Analyte

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

Analysis Batch: 45831

Gasoline Range Organics

Diesel Range Organics (Over

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

Sample Sample

MS MS

%Recovery Qualifier

109

94

<49.9 U

97.8

Result Qualifier

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

020.	00/1100	01002	
nple ID: Prep Ty	Matrix /pe: Tot		
Prep Rec	Batch:	45658	5
mits			
- 130			
- 130			7
			8
			9
atrix Spi			
Prep Ty	pe: Tot	al/NA	
Prep	Batch:	45658	
Rec		RPD	
mits	RPD	Limit	
- 130	20	20	

Matrix: Solid										уре: То	
Analysis Batch: 45831										Batch:	4565
	Sample	Sample	Spike	MSD	MSD				%Rec		RPI
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics	<49.9	U	1000	1103		mg/Kg		108	70 - 130	20	20
(GRO)-C6-C10											
Diesel Range Organics (Over	97.8		1000	952.5		mg/Kg		85	70 - 130	9	20
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	123		70 - 130								
o-Terphenyl	103		70 - 130								

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45078/1-A Matrix: Solid Analysis Batch: 45243										Client S	Sample ID: I Prep	Method Type: S	
Analysis Batch. 40240	МВ	МВ											
Analyte	Result	Qualifier		RL		MDL	Unit		D F	Prepared	Analyz	əd	Dil Fac
Chloride	<5.00	U		5.00			mg/Kg				02/01/23	3:13	1
Lab Sample ID: LCS 880-45078/2-A									Clien	t Sample	e ID: Lab Co	ontrol S	ample
Matrix: Solid												Type: S	
Analysis Batch: 45243													
			Spike		LCS	LCS					%Rec		
Analyte			Added		Result	Qual	ifier	Unit	D	%Rec	Limits		
Chloride			250		252.0			mg/Kg		101	90 - 110		
Lab Sample ID: LCSD 880-45078/3-A								Cl	ient Sar	nple ID:	Lab Contro	Sampl	e Dup
Matrix: Solid												Type: S	
Analysis Batch: 45243													
-			Spike		LCSD	LCS	D				%Rec		RPD
Analyte			Added		Result	Qual	ifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250		252.0			mg/Kg		101	90 - 110	0	20

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Project/Site: North Brushy PW Line

Client: Ensolum

Job ID: 890-3964-1 SDG: 03A1987062

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3962-A-	56-B MS							Client	Sample ID: I		-
Matrix: Solid									Prep Ty	/pe: S	oluble
Analysis Batch: 45243		<b>.</b> .	• "						~ 5		
	•	Sample	Spike	MS	MS		_	~ <del>-</del>	%Rec		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Chloride	<5.01	U	251	258.2		mg/Kg		103	90 - 110		
Lab Sample ID: 890-3962-A- Matrix: Solid	56-C MSD					•	Client S	ample IC	D: Matrix Spil Prep Ty		
Analysis Batch: 45243									i i cp i j	/pc. 0	orubic
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	<5.01	U	251	258.9		mg/Kg		103	90 - 110	0	20
											<b>.</b>
Lab Sample ID: 890-3963-A-	6-B MS							Client	Sample ID: I		
Matrix: Solid									Prep Ty	/pe: So	oluble
Analysis Batch: 45243	0	0	0						% <b>D</b> = =		
Ameluán	•	Sample	Spike	MS	MS Qualifier	11		% Daa	%Rec		
Analyte Chloride	<b>Result</b> 	Qualifier	Added 2490		F1		D	%Rec 137	Limits 90 - 110		
	4490	FI	2490	7000	FI	mg/Kg		137	90 - 110		
Lab Sample ID: 890-3963-A- Matrix: Solid	6-C MSD					•	Client S	ample IC	): Matrix Spil Prep Ty		
Analysis Batch: 45243											
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4490	F1	2490	7889	F1	mg/Kg		137	90 - 110	0	20
Lab Sample ID: MB 880-4508 Matrix: Solid Analysis Batch: 45245	36/1-A							Client S	Sample ID: M Prep Ty		
		MB MB									
Analyte	R	esult Qualifier		RL	MDL Unit		D F	repared	Analyzed	1	Dil Fac
Chloride	<	<5.00 U		5.00	mg/K	ίg			02/02/23 08	:28	1
_ Lab Sample ID: LCS 880-450 Matrix: Solid	086/2-A						Clien	t Sample	ID: Lab Cor		-
Analysis Batch: 45245									Prep Ty	ype. o	oluble
Analysis Baten. 40240			Spike	LCS	LCS				%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Chloride			250	274.6		mg/Kg		110	90 - 110		
Lab Sample ID: LCSD 880-4 Matrix: Solid	5086/3-A					Cli	ent San	nple ID:	Lab Control S Prep Ty		
Analysis Batch: 45245											
			Spike		LCSD				%Rec		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	260.7		mg/Kg		104	90 - 110	5	20
								Client	Sample ID: I	Matrix	Spike
Lab Sample ID: 890-3959-A-	04-D IVI 3								Prep Ty		-
Lab Sample ID: 890-3959-A- Matrix: Solid	04-D IVIS								FIEDIN	pe. a	oluble
Matrix: Solid	04-D WIS								Fiebi	ype: S	oluble
		Sample	Spike	MS	MS				%Rec	/pe. S	oluble
Matrix: Solid	Sample	Sample Qualifier	Spike Added		MS Qualifier	Unit	D	%Rec		ype. So	UUDIe

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Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-3964-1 SDG: 03A1987062

## Method: 300.0 - Anions, Ion Chromatography

ab Sample ID: 890-3959-A-6						CI	iont S	ample ID	: Matrix Sp	iko Dun	licato	
ab Sample ID. 690-5959-A-6	4-C 1015D					CI	ient Sa	Inple ID		Type: So		
nalysis Batch: 45245										.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
nalyte		Qualifier	Added		Qualifier	Unit	<u>D</u>	%Rec	Limits	RPD	Limit	
hloride	336	F1	250	669.2	F1	mg/Kg		133	90 - 110	4	20	
												ł
												I

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## **QC Association Summary**

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-3964-1 SDG: 03A1987062

## **GC VOA**

### Prep Batch: 45605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3964-1	BH01	Total/NA	Solid	5035	
890-3964-2	BH02	Total/NA	Solid	5035	
890-3964-3	BH03	Total/NA	Solid	5035	
890-3964-4	BH04	Total/NA	Solid	5035	
890-3964-5	BH05	Total/NA	Solid	5035	
890-3964-6	BH06	Total/NA	Solid	5035	
890-3964-7	BH07	Total/NA	Solid	5035	
890-3964-8	BH08	Total/NA	Solid	5035	
890-3964-9	BH09	Total/NA	Solid	5035	
MB 880-45605/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45605/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45605/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3964-1 MS	BH01	Total/NA	Solid	5035	

#### Analysis Batch: 45647

890-3964-7	BH07	Total/NA	Solid	5035		
890-3964-8	BH08	Total/NA	Solid	5035		8
890-3964-9	BH09	Total/NA	Solid	5035		
MB 880-45605/5-A	Method Blank	Total/NA	Solid	5035		9
LCS 880-45605/1-A	Lab Control Sample	Total/NA	Solid	5035		
LCSD 880-45605/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-3964-1 MS	BH01	Total/NA	Solid	5035		
analysis Batch: 45647						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-3964-1	BH01	Total/NA	Solid	8021B	45605	
890-3964-2	BH02	Total/NA	Solid	8021B	45605	4.9
890-3964-3	BH03	Total/NA	Solid	8021B	45605	13
890-3964-4	BH04	Total/NA	Solid	8021B	45605	
890-3964-5	BH05	Total/NA	Solid	8021B	45605	
890-3964-6	BH06	Total/NA	Solid	8021B	45605	
890-3964-7	BH07	Total/NA	Solid	8021B	45605	
390-3964-8	BH08	Total/NA	Solid	8021B	45605	
890-3964-9	BH09	Total/NA	Solid	8021B	45605	
MB 880-45605/5-A	Method Blank	Total/NA	Solid	8021B	45605	
LCS 880-45605/1-A	Lab Control Sample	Total/NA	Solid	8021B	45605	
LCS 880-45701/1-A	Lab Control Sample	Total/NA	Solid	8021B	45701	
LCSD 880-45605/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45605	
LCSD 880-45701/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45701	
880-24295-A-20-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45701	
890-3964-1 MS	BH01	Total/NA	Solid	8021B	45605	

#### Prep Batch: 45701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-45701/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45701/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24295-A-20-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 45776

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3964-1	BH01	Total/NA	Solid	Total BTEX	
890-3964-2	BH02	Total/NA	Solid	Total BTEX	
890-3964-3	BH03	Total/NA	Solid	Total BTEX	
890-3964-4	BH04	Total/NA	Solid	Total BTEX	
890-3964-5	BH05	Total/NA	Solid	Total BTEX	
890-3964-6	BH06	Total/NA	Solid	Total BTEX	
890-3964-7	BH07	Total/NA	Solid	Total BTEX	
890-3964-8	BH08	Total/NA	Solid	Total BTEX	
890-3964-9	BH09	Total/NA	Solid	Total BTEX	

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## **QC** Association Summary

Client: Ensolum Project/Site: North Brushy PW Line

GC Semi VOA Prep Batch: 45658

#### Lab Sample ID **Client Sample ID** Matrix Method Prep Batch Prep Type 890-3964-1 BH01 Total/NA Solid 8015NM Prep 890-3964-2 BH02 Total/NA Solid 8015NM Prep 890-3964-3 BH03 Total/NA Solid 8015NM Prep 890-3964-4 BH04 Total/NA Solid 8015NM Prep 890-3964-5 BH05 Total/NA Solid 8015NM Prep 890-3964-6 BH06 Total/NA Solid 8015NM Prep 890-3964-7 BH07 Total/NA Solid 8015NM Prep BH08 Total/NA 890-3964-8 Solid 8015NM Prep 890-3964-9 BH09 Total/NA Solid 8015NM Prep MB 880-45658/1-A Method Blank Total/NA Solid 8015NM Prep LCS 880-45658/2-A Lab Control Sample Total/NA Solid 8015NM Prep LCSD 880-45658/3-A Lab Control Sample Dup Total/NA Solid 8015NM Prep 890-3961-A-7-D MS Matrix Spike Total/NA Solid 8015NM Prep 890-3961-A-7-E MSD Matrix Spike Duplicate Total/NA Solid 8015NM Prep

#### Analysis Batch: 45831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3964-1	BH01	Total/NA	Solid	8015B NM	45658
890-3964-2	BH02	Total/NA	Solid	8015B NM	45658
890-3964-3	BH03	Total/NA	Solid	8015B NM	45658
890-3964-4	BH04	Total/NA	Solid	8015B NM	45658
890-3964-5	BH05	Total/NA	Solid	8015B NM	45658
890-3964-6	BH06	Total/NA	Solid	8015B NM	45658
890-3964-7	BH07	Total/NA	Solid	8015B NM	45658
890-3964-8	BH08	Total/NA	Solid	8015B NM	45658
890-3964-9	BH09	Total/NA	Solid	8015B NM	45658
MB 880-45658/1-A	Method Blank	Total/NA	Solid	8015B NM	45658
LCS 880-45658/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45658
LCSD 880-45658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45658
890-3961-A-7-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45658
890-3961-A-7-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45658

#### Analysis Batch: 45970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3964-1	BH01	Total/NA	Solid	8015 NM	
890-3964-2	BH02	Total/NA	Solid	8015 NM	
890-3964-3	BH03	Total/NA	Solid	8015 NM	
890-3964-4	BH04	Total/NA	Solid	8015 NM	
890-3964-5	BH05	Total/NA	Solid	8015 NM	
890-3964-6	BH06	Total/NA	Solid	8015 NM	
890-3964-7	BH07	Total/NA	Solid	8015 NM	
890-3964-8	BH08	Total/NA	Solid	8015 NM	
890-3964-9	BH09	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 45078

Lab Sample ID 890-3964-1	Client Sample ID BH01	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
890-3964-2	BH02	Soluble	Solid	DI Leach	
890-3964-3	BH03	Soluble	Solid	DI Leach	

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## **QC Association Summary**

Client: Ensolum Project/Site: North Brushy PW Line

## HPLC/IC (Continued)

### Leach Batch: 45078 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3964-4	BH04	Soluble	Solid	DI Leach	
890-3964-5	BH05	Soluble	Solid	DI Leach	
890-3964-6	BH06	Soluble	Solid	DI Leach	
890-3964-7	BH07	Soluble	Solid	DI Leach	
890-3964-8	BH08	Soluble	Solid	DI Leach	
MB 880-45078/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45078/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45078/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3962-A-56-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3962-A-56-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-3963-A-6-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3963-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Leach Batch: 45086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3964-9	BH09	Soluble	Solid	DI Leach	1
MB 880-45086/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45086/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45086/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3959-A-64-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3959-A-64-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 45243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3964-1	BH01	Soluble	Solid	300.0	45078
890-3964-2	BH02	Soluble	Solid	300.0	45078
890-3964-3	BH03	Soluble	Solid	300.0	45078
890-3964-4	BH04	Soluble	Solid	300.0	45078
890-3964-5	BH05	Soluble	Solid	300.0	45078
890-3964-6	BH06	Soluble	Solid	300.0	45078
890-3964-7	BH07	Soluble	Solid	300.0	45078
890-3964-8	BH08	Soluble	Solid	300.0	45078
MB 880-45078/1-A	Method Blank	Soluble	Solid	300.0	45078
LCS 880-45078/2-A	Lab Control Sample	Soluble	Solid	300.0	45078
LCSD 880-45078/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45078
890-3962-A-56-B MS	Matrix Spike	Soluble	Solid	300.0	45078
890-3962-A-56-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45078
890-3963-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	45078
890-3963-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45078

#### Analysis Batch: 45245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3964-9	BH09	Soluble	Solid	300.0	45086
MB 880-45086/1-A	Method Blank	Soluble	Solid	300.0	45086
LCS 880-45086/2-A	Lab Control Sample	Soluble	Solid	300.0	45086
LCSD 880-45086/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45086
890-3959-A-64-B MS	Matrix Spike	Soluble	Solid	300.0	45086
890-3959-A-64-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45086

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#### Job ID: 890-3964-1 SDG: 03A1987062

Project/Site: North Brushy PW Line

5 6

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Job ID: 890-3964-1 SDG: 03A1987062

## Lab Sample ID: 890-3964-1 Matrix: Solid

Lab Sample ID: 890-3964-2

Lab Sample ID: 890-3964-3

Lab Sample ID: 890-3964-4

Matrix: Solid

Matrix: Solid

Date Collected: 01/25/23 10:40 Date Received: 01/26/23 14:33

**Client Sample ID: BH01** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	45605	02/06/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45647	02/07/23 15:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45776	02/08/23 11:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45970	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 01:27	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		1			45243	02/02/23 09:36	СН	EET MID

## **Client Sample ID: BH02**

## Date Collected: 01/25/23 10:50

Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	45605	02/06/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45647	02/07/23 15:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45776	02/08/23 11:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45970	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 02:12	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		20			45243	02/02/23 09:54	СН	EET MID

## **Client Sample ID: BH03**

## Date Collected: 01/25/23 11:00

Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	45605	02/06/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45647	02/07/23 16:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45776	02/08/23 11:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45970	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 02:35	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		5			45243	02/02/23 10:01	CH	EET MID

#### **Client Sample ID: BH04** Date Collected: 01/25/23 11:10 Date Received: 01/26/23 14:33

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45605	02/06/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45647	02/07/23 16:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45776	02/08/23 11:09	AJ	EET MID

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Matrix: Solid

## Released to Imaging: 2/17/2025 2:02:20 PM

Project/Site: North Brushy PW Line

Job ID: 890-3964-1 SDG: 03A1987062

## Lab Sample ID: 890-3964-4 Matrix: Solid

Lab Sample ID: 890-3964-5

Date Collected: 01/25/23 11:10 Date Received: 01/26/23 14:33

**Client Sample ID: BH04** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			45970	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 02:57	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		10			45243	02/02/23 10:07	СН	EET MID

## Client Sample ID: BH05

#### Date Collected: 01/25/23 11:20 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	45605	02/06/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45647	02/07/23 21:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45776	02/08/23 11:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45970	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 03:19	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		10			45243	02/02/23 10:13	СН	EET MID

#### **Client Sample ID: BH06**

Date Collected: 01/25/23 11:30 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	45605	02/06/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45647	02/07/23 21:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45776	02/08/23 11:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45970	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 03:42	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		10			45243	02/02/23 10:19	CH	EET MID

#### **Client Sample ID: BH07**

#### Date Collected: 01/25/23 11:40 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	45605	02/06/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45647	02/07/23 22:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45776	02/08/23 11:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45970	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 04:05	SM	EET MID

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Lab Sample ID: 890-3964-6

Lab Sample ID: 890-3964-7

Matrix: Solid

Matrix: Solid

Matrix: Solid

## Lab Chronicle

Job ID: 890-3964-1 SDG: 03A1987062

Matrix: Solid

Matrix: Solid

Matrix: Solid

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Lab Sample ID: 890-3964-7

Lab Sample ID: 890-3964-8

Lab Sample ID: 890-3964-9

#### Client Sample ID: BH07 Date Collected: 01/25/23 11:40

Project/Site: North Brushy PW Line

Client: Ensolum

Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		10			45243	02/02/23 10:25	СН	EET MID

## Client Sample ID: BH08

#### Date Collected: 01/25/23 11:50 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	45605	02/06/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45647	02/07/23 22:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45776	02/08/23 11:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45970	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 04:27	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		10			45243	02/02/23 10:31	СН	EET MID

## Client Sample ID: BH09 Date Collected: 01/25/23 12:00

#### Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45605	02/06/23 13:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45647	02/07/23 23:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45776	02/08/23 11:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45970	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 04:49	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	45086	01/30/23 16:02	KS	EET MID
Soluble	Analysis	300.0		20	0 mL	1.0 mL	45245	02/02/23 10:43	CH	EET MID

#### Laboratory References:

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

		Accreditation/Co	ertification Summary		
Client: Ensolum Project/Site: North Brus	shy PW Line			Job ID: 890-3964-1 SDG: 03A1987062	2
Laboratory: Eurofi					
Unless otherwise noted, all ar	nalytes for this laborator	y were covered under each acci	editation/certification below.		
Authority		Program	Identification Number	Expiration Date	
Texas		NELAP	T104704400-22-25	06-30-23	E
The following analytes a	are included in this repo	rt. but the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for which	5
the agency does not off		, <b>,</b>	, , , , ,	, ,	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					11
					13

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## **Method Summary**

#### Client: Ensolum Project/Site: North Brushy PW Line

Job ID: 890-3964-1 SDG: 03A1987062

ethod	Method Description	Protocol	Laboratory
021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal BTEX	Total BTEX Calculation	TAL SOP	EET MID
015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
0.00	Anions, Ion Chromatography	EPA	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
l Leach	Deionized Water Leaching Procedure	ASTM	EET MID
	INTM International Environmental Protection Agency		
SW846 = '	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Ed	lition, November 1986 And Its Updates.	
TAL SOP :	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory Re			
EET MID =	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

#### Laboratory References:

Eurofins Carlsbad

## Sample Summary

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-3964-1 SDG: 03A1987062

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
390-3964-1	BH01	Solid	01/25/23 10:40	01/26/23 14:33	0.5'
890-3964-2	BH02	Solid	01/25/23 10:50	01/26/23 14:33	0.5'
890-3964-3	BH03	Solid	01/25/23 11:00	01/26/23 14:33	0.5'
390-3964-4	BH04	Solid	01/25/23 11:10	01/26/23 14:33	0.5'
890-3964-5	BH05	Solid	01/25/23 11:20	01/26/23 14:33	0.5'
890-3964-6	BH06	Solid	01/25/23 11:30	01/26/23 14:33	0.5'
390-3964-7	BH07	Solid	01/25/23 11:40	01/26/23 14:33	0.5'
890-3964-8	BH08	Solid	01/25/23 11:50	01/26/23 14:33	0.5'
890-3964-9	BH09	Solid	01/25/23 12:00	01/26/23 14:33	0.5'

0	Xenco		Daso. TX (9)	15) 585-34	<ol> <li>San Aniono,</li> <li>Lubbock, 1</li> </ol>	Midiand, 1X (432) 704-5440, San Antonio, 1X (210) 508-5354 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	96 4					
		Hob	bs, NM (57)	5) 392-755	D, Carlsbad, N	M (575) 988-31	66		www	v.xenco.c		e l of l
	-	3ill to: (if differen		im Raley					V	Vork Ord	er Commen	nts
	0	Company Nam		VPX				Program: L			rownfields	] RRC 🗌 Superfunc
ks HWY	1	Address:		315 Buena	Vista Dr.			State of Pro	oject:			
20	0	City, State ZIP:		arlsbad, N	IM 88220			Reporting: L		evel III		
	Email: 0	amoreno@Er	nsolum.co		tley@dvn.c	om		Deliverables	s: EDD	A	DaPT	Other:
Line	Turn	Around				ANA	LYSIS RE	QUEST			Pre	Preservative Codes
	Routine	Rush	Pres. Code								None: NO	IO DI Water: H <sub>2</sub> O
	Due Date:	5 Day TAT	·	-	_		_				Cool: Cool	õ
	TAT starts the	day received by					_				HCL: HC	
	the lab, if rece	ived by 4:30pm	die-		-						H2SU4: F	H <sub>2</sub> NaUH: Na
-	Wet Ice:	Yes) No		0.0)							H3PU4:1	NARIS
		D'		PA: 3					-		Na2S2O3	Na2S2O3: NaSO3
	e Reading:	2	<u> </u>	S (E	1	890-3964	Chain or o		-	_	Zn Aceta	Zn Acetate+NaOH: Zn
Corrected T	emperature:	(r)			802	_					NaOH+/	NaOH+Ascorbic Acid: SAPC
trix Date Sampled	Time Sampled	Depth Comp	# of Cont		BTEX						Sa	Sample Comments
S 01.25.23	10:40		1 10	X X	×							
S 01.25.23	10:50 0		s/ 1	××	×							
	11:00 0		0/ 1	× ×	×							Incident ID
S 01.25.23	11:10 0		y 1	××	×						'n.	nAPP2231126594
S 01.25.23	11:20 0		9/ 1	×	×							
S 01.25.23	11:30 0		-	×	×							
				-	×		-				-	
				╢					T		+	
				-	×							
				4								
	RCRA 13PI			As Ba	Be B Cd	Ca Cr Co		NI Se Aa T	×	T	Na Sr TI 1/245.1/	Sn U V Zn 7470 / 7471
nent of samples cor	stitutes a valld p	urchase order fro	om client co	mpany to Eu	rofins Xenco, i	s affiliates and a	ubcontractor	rs. It assigns stan	idard terms ar	nd conditions	2 "	
III be applied to each	h project and a ch	large of \$5 for each	ch sample s	ubmitted to	Eurofins Xenco	, but not analyze	d. These tern	ns will be enforce	d unless previ	ously negoti	ated.	
Receive	d by: (Signat	ure)		Date/Time		elinquished	by: (Signa	iture)	Received	by: (Sign	lature)	Date/Time
man	a Xet	tatt-	5	6-23	14:32							
		/			4							
	Project Manager:       Gilbert Moreno         Company Name:       Ensolum         Address:       3122 National Parks HWY         City, State ZIP:       Carisbad, NM 88220         Phone:       832-541-7719         Project Name:       North Brushy PW Line         Project Number:       03A 1987062         Project Number:       Gilbert Moreno         CC #:       0001900347         Samples Received Intact:       Yes <no< td="">         Cooler Custody Seals:       Yes<no< td="">         Sample Custody Seals:       Yes<no< td="">         Sample Custody Seals:       Yes<no< td="">         Sample Identification       Matrix       Sampled         BH03       S       01.25.23         BH04       S       01.25.23         BH05       S       01.25.23         BH06       S       01.25.23         BH07       S       01.25.23         BH08       S       01.25.23         BH09       S       01.25.23         BH08       S       01.25.23         BH08       S       01.25.23         BH09       S       01.25.23         BH08       S       01.25.23         BH09       S<td>Ks     HWY     Image: Second state st</td><td>Image: Solution of Soluti</td><td>Image: Second second</td><td>EL Paso. TX (915) 595-34.       Hobs, NM (575) 392-755       20     Jim Raley Company Name:     WPX WPX       20     City, State ZIP:     S315 Buena       20     Email:     gmoreno@Ensolum.com.lim.rr       20     The moreno@Ensolum.com.lim.rr     S315 Buena       20     Turn Around     Prax       20     TAT starts the day received by the lab. if received by the lab. if received by 4 30pm     Corrected Temperature:     Corrected Temperature:       20     1.25.23     10:40     0.5'     Grab/     1       20     0.25.23     11:20     0.5'     Grab/     1       20     1.25.23     11:20     0.5'     Grab/     1     X       20     1.25.23     11:20     0.5'     Grab/     1     X     X       20     1.25.23     11:20     0.5'     Grab/     1     X     X       20     0.25.23     11:20     0.5'     Grab/     1     X     X       30     0.25.23     11:30     0.5'     Grab/     1     X     X       3     01.25.23     11:40     0.5'     Grab/     1     X     X       3     01.25.23     11:40     0.5'     Grab/     1     X<td>EL Paso, TX (915) 565-343, Lubbook, THOBS, NM (975) 392-7550, Cansbead, NM 88220       Line     Turn Around     Im Raily Company Name:     WPX       Line     Turn Around     Frea.     S15 Buena Vista Dr. Cansbead, NM 88220       Line     Turn Around     Frea.       The all, gmorence/end by 4:30pm     Frea.       The all, if received by 4:30pm     Cansbead, NM 88220       Correction Factor:     Frea.       Correction Factor:     Frea.       Corrected Temperature Reading:     Frea.       S     01.25.23     10:50       0.125.23     10:50     0.5'       Grabb     1     X       S     01.25.23     11:100       0.5'     Grabb     1       S     01.25.23     11:200       0.5'     Grabb     1       S     01.25.23     12:00       1     X     X       S     01.25.23     12:00       1     X     X       S     01.25.23     12:00       1     X     X       S     01.25.23     12:00       S     01.25.23</td><td>EL Paso, TX (915) 595-5443, Lubbock, TX (906) 764-12       HUNY     Bill to: (if different)     Jim Raley       Company Name:     WPX       20     Email: gmorence@Ensolum.com.jim raley@dvn.com       Line     Tum Around     real       City, State ZIP:     Carlsbad, NM (975) 98-31       Line     Tum Around     Franal: gmorence@Ensolum.com.jim raley@dvn.com       Une     Tum Around     Franal: gmorence@Ensolum.com.jim raley@dvn.com       That starts the day received by the lab. if received by 4.30pm     France     AMA       Thermometer.ID:     Concellon Factor:     NA       Corrected Temperature     Carlsbad     M 8220       S     01.25.23     10.50     0.5       S     01.25.23     11.20     0.5     Grab/       S     01.25.23     11.20     0.5     Grab/       S     01.25.23     11.20     0.5     Grab/       S     01.25.23     11.20     0.5     Grab/     1       S     01.25.23     11.20     0.5     Grab/     1     X       S     01.25.23     11.20     0.5     Grab/     1     X     X       S     01.25.23     11.20     0.5     Grab/     1     X     X     X       S     01</td><td>EL Paso     TV, (915) 585-5441, Lubbock, TX (906) 794-1266 Hobbs, NM (575) 392-7550, Canabad, NM (575) 398-7199       20     Email:     Company Name: (Press)     VPX       20     Company Name: (Press)     VPX     Carlsbad, NM 88220       20     Company Name: (Press)     Carlsbad, NM 88220     AMALYSIS Ref       20     Company Name: (Press)     Carlsbad, NM 88220     AMALYSIS PR       20     Company Name: (Press)     Carlsbad, NM 88220     AMALYSIS PR</td><td>EL Paso, TX (51) 555-343. 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2/10/2023

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Job Number: 890-3964-1 SDG Number: 03A1987062

List Source: Eurofins Carlsbad

## Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 3964 List Number: 1 Creator: Stutzman, Amanda

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

<6mm (1/4").

Login Number: 3964 List Number: 2 Creator: Rodriguez, Leticia

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	N/A	

Job Number: 890-3964-1 SDG Number: 03A1987062 List Source: Eurofins Midland 5 6 7 8 9 10 11 12 13 List Creation: 01/30/23 09:34 AM 14 Received by OCD: 4/15/2024 2:04:17 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Devon Team Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 2/10/2023 11:58:17 AM

## JOB DESCRIPTION

North Brushy PW Line SDG NUMBER 03A1987062

## **JOB NUMBER**

890-3963-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

Received by OCD: 4/15/2024 2:04:17 PM

## **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

RAMER

Generated 2/10/2023 11:58:17 AM

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

1

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Laboratory Job ID: 890-3963-1 SDG: 03A1987062

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	D: 4/15/2024 2:04:17 PM	<b>Page 133 of</b> .	
	Definitions/Glossary		
Client: Ensolu	m	Job ID: 890-3963-1	
Project/Site: N	orth Brushy PW Line	SDG: 03A1987062	
Qualifiers			
GC VOA			
Qualifier	Qualifier Description		
*-	LCS and/or LCSD is outside acceptance limits, low biased.		
*1	LCS/LCSD RPD exceeds control limits.		
S1-	Surrogate recovery exceeds control limits, low biased.		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VO	N		
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
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.		
a	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)

Limit of Quantitation (DoD/DOE) LOQ

EPA recommended "Maximum Contaminant Level" MCL

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

- Not Detected at the reporting limit (or MDL or EDL if shown) ND
- Negative / Absent NEG POS Positive / Present
- Practical Quantitation Limit PQL
- PRES Presumptive QC Quality Control
- RER Relative Error Ratio (Radiochemistry)
- Reporting Limit or Requested Limit (Radiochemistry) RL
- 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

Job ID: 890-3963-1 SDG: 03A1987062

#### Job ID: 890-3963-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-3963-1

#### Receipt

The samples were received on 1/26/2023 2:33 PM. 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 1.0°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-3963-1), BH02 (890-3963-2), BH03 (890-3963-3), BH04 (890-3963-4), BH05 (890-3963-5), BH06 (890-3963-6) and BH07 (890-3963-7).

#### GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-45398 and analytical batch 880-45308 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-24120-A-2-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-45527/5-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-45078 and 880-45078 and analytical batch 880-45243 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Job ID: 890-3963-1 SDG: 03A1987062

## Client Sample ID: BH01

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 12:10 Date Received: 01/26/23 14:33

Sample Depth: 4'

Client: Ensolum

Lab Sample ID: 890-3963-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U *- *1	0.00200		mg/Kg		02/03/23 12:58	02/05/23 06:59	
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		02/03/23 12:58	02/05/23 06:59	
Ethylbenzene	<0.00200	U *- *1	0.00200		mg/Kg		02/03/23 12:58	02/05/23 06:59	
m-Xylene & p-Xylene	<0.00399	U *- *1	0.00399		mg/Kg		02/03/23 12:58	02/05/23 06:59	
o-Xylene	<0.00200	U *- *1	0.00200		mg/Kg		02/03/23 12:58	02/05/23 06:59	
Xylenes, Total	<0.00399	U *- *1	0.00399		mg/Kg		02/03/23 12:58	02/05/23 06:59	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)			70 - 130				02/03/23 12:58	02/05/23 06:59	
1,4-Difluorobenzene (Surr)	112		70 - 130				02/03/23 12:58	02/05/23 06:59	
Method: TAL SOP Total BTEX - 1									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/06/23 12:09	
Method: SW846 8015 NM - Diese									
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			02/10/23 10:33	
Method: SW846 8015B NM - Dies									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	_	mg/Kg		02/07/23 09:21	02/09/23 22:52	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/09/23 22:52	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/09/23 22:52	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	106		70 - 130				02/07/23 09:21	02/09/23 22:52	
o-Terphenyl	104		70 - 130				02/07/23 09:21	02/09/23 22:52	
Method: EPA 300.0 - Anions, Ion	· · ·	-							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	10800		100	_	mg/Kg	_		02/02/23 08:40	2
lient Sample ID: BH02							Lab San	nple ID: 890-3	3963-:
ate Collected: 01/25/23 12:20								Matri	x: Soli
ate Received: 01/26/23 14:33									
ample Depth: 4'									
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201	U *- *1	0.00201		mg/Kg		02/03/23 12:58	02/05/23 07:19	
Toluene	<0.00201	U *- *1	0.00201		mg/Kg		02/03/23 12:58	02/05/23 07:19	

Ethylbenzene

Xylenes, Total

Surrogate

o-Xylene

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

0.00201

0.00402

0.00201

0.00402

Limits

70 - 130

mg/Kg

mg/Kg

mg/Kg

mg/Kg

02/03/23 12:58

02/03/23 12:58

02/03/23 12:58

02/03/23 12:58

Prepared

02/03/23 12:58

02/05/23 07:19

02/05/23 07:19

02/05/23 07:19

02/05/23 07:19

Analyzed

02/05/23 07:19

<0.00201 U\*-\*1

<0.00402 U\*-\*1

<0.00201 U\*-\*1

<0.00402 U\*-\*1

%Recovery Qualifier

115

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1

1

1

1

1

Dil Fac

## **Client Sample Results**

Job ID: 890-3963-1 SDG: 03A1987062

Matrix: Solid

Lab Sample ID: 890-3963-2

### Client Sample ID: BH02

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 12:20 Date Received: 01/26/23 14:33

Sample Depth: 4'

Client: Ensolum

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

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)			70 - 130				02/03/23 12:58	02/05/23 07:19	1
Method: TAL SOP Total BTEX -	Total BTEX Calo	ulation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/06/23 12:09	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte	•••	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	68.3		49.9		mg/Kg			02/10/23 10:33	1
Method: SW846 8015B NM - Die Analyte	• •	nics (DRO) Qualifier	(GC) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015B NM - Die	sel Range Orga	nice (DRO)	(60)						
Analyte Gasoline Range Organics	• •	Qualifier	• •	MDL	Unit mg/Kg	<u>D</u>	Prepared 02/07/23 09:21	Analyzed 02/09/23 23:14	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10	Result	Qualifier		MDL		D	<u> </u>		<b>Dil Fac</b> 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9	Qualifier	<b>RL</b> 49.9	MDL	mg/Kg	<u> </u>	02/07/23 09:21	02/09/23 23:14	Dil Fac
Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9	Qualifier U	<b>RL</b> 49.9	MDL	mg/Kg	<u> </u>	02/07/23 09:21	02/09/23 23:14	<u>Dil Fac</u> 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 68.3	Qualifier U	RL 49.9	MDL	mg/Kg mg/Kg	<u> </u>	02/07/23 09:21	02/09/23 23:14	Dil Fac 1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9 68.3 <49.9	Qualifier U	RL 49.9 49.9 49.9	MDL	mg/Kg mg/Kg	<u> </u>	02/07/23 09:21 02/07/23 09:21 02/07/23 09:21	02/09/23 23:14 02/09/23 23:14 02/09/23 23:14	1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <49.9 68.3 <49.9 %Recovery	Qualifier U	RL           49.9           49.9           49.9           Limits	MDL	mg/Kg mg/Kg	<u> </u>	02/07/23 09:21 02/07/23 09:21 02/07/23 09:21 02/07/23 09:21 <b>Prepared</b>	02/09/23 23:14 02/09/23 23:14 02/09/23 23:14 02/09/23 23:14 Analyzed	1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <49.9	Qualifier U Qualifier	RL           49.9           49.9           49.9           20.9           Limits           70 - 130           70 - 130	MDL	mg/Kg mg/Kg	<u> </u>	02/07/23 09:21 02/07/23 09:21 02/07/23 09:21 02/07/23 09:21 <b>Prepared</b> 02/07/23 09:21	02/09/23 23:14 02/09/23 23:14 02/09/23 23:14 02/09/23 23:14 <u>Analyzed</u> 02/09/23 23:14	1 1 1

Chloride	255	4.99	mg/Kg	02/02/23 08:46	ī
Client Sample ID: BH03				Lab Sample ID: 890-3963-3	5

#### Date Collected: 01/25/23 12:30 Date Received: 01/26/23 14:33 Sample Depth: 4'

Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Benzene <0.00200 U \*- \*1 0.00200 mg/Kg 02/03/23 12:58 02/05/23 07:39 Toluene <0.00200 U\*-\*1 0.00200 02/03/23 12:58 02/05/23 07:39 mg/Kg 1 Ethylbenzene <0.00200 U\*-\*1 0.00200 mg/Kg 02/03/23 12:58 02/05/23 07:39 1 <0.00401 U\*-\*1 02/03/23 12:58 0.00401 m-Xylene & p-Xylene mg/Kg 02/05/23 07:39 1 o-Xylene <0.00200 U\*-\*1 0.00200 mg/Kg 02/03/23 12:58 02/05/23 07:39 1 Xylenes, Total <0.00401 U\*-\*1 0.00401 mg/Kg 02/03/23 12:58 02/05/23 07:39 1 %Recovery Qualifier Limits Dil Fac Surrogate Prepared Analyzed 115 70 - 130 02/03/23 12:58 4-Bromofluorobenzene (Surr) 02/05/23 07:39 1 1,4-Difluorobenzene (Surr) 112 70 - 130 02/03/23 12:58 02/05/23 07:39 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL MDL Unit D Dil Fac Prepared Analyzed Total BTEX <0.00401 U 0.00401 02/06/23 12:09 mg/Kg 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			02/10/23 10:33	1

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Matrix: Solid

Job ID: 890-3963-1 SDG: 03A1987062

Matrix: Solid

Lab Sample ID: 890-3963-3

Lab Sample ID: 890-3963-4

Matrix: Solid

## **Client Sample ID: BH03**

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 12:30 Date Received: 01/26/23 14:33

Sample Depth: 4'

Client: Ensolum

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/09/23 23:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/09/23 23:36	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/09/23 23:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130				02/07/23 09:21	02/09/23 23:36	1
o-Terphenyl	107		70 - 130				02/07/23 09:21	02/09/23 23:36	1

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6870		49.5		mg/Kg			02/02/23 08:52	10

## **Client Sample ID: BH04**

#### Date Collected: 01/25/23 12:40 4:33

Date Received: 01/26/	23 14
Sample Depth: 4'	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U *- *1	0.00199		mg/Kg		02/03/23 12:58	02/05/23 08:00	1
Toluene	<0.00199	U *- *1	0.00199		mg/Kg		02/03/23 12:58	02/05/23 08:00	1
Ethylbenzene	<0.00199	U *- *1	0.00199		mg/Kg		02/03/23 12:58	02/05/23 08:00	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398		mg/Kg		02/03/23 12:58	02/05/23 08:00	1
o-Xylene	<0.00199	U *- *1	0.00199		mg/Kg		02/03/23 12:58	02/05/23 08:00	1
Xylenes, Total	<0.00398	U *- *1	0.00398		mg/Kg		02/03/23 12:58	02/05/23 08:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130				02/03/23 12:58	02/05/23 08:00	1
1,4-Difluorobenzene (Surr)	101		70 _ 130				02/03/23 12:58	02/05/23 08:00	1

Method: TAL SOP Total BTEX	C - Total BTEX Calculation
Analyto	Popult Qualifier

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398		0.00398	mg/Kg			02/06/23 12:09	1

#### 

94

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	64.0		50.0		mg/Kg			02/10/23 10:33	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/09/23 23:58	1
(GRO)-C6-C10									
Diesel Range Organics (Over	64.0		50.0		mg/Kg		02/07/23 09:21	02/09/23 23:58	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 09:21	02/09/23 23:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				02/07/23 09:21	02/09/23 23:58	1

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02/09/23 23:58

02/07/23 09:21

5

o-Terphenyl

70 - 130

		Clien	t Sample R	Results	;				
Client: Ensolum								Job ID: 890	
Project/Site: North Brushy PW Line								SDG: 03A1	98706
Client Sample ID: BH04							Lab Sar	nple ID: 890-	3963-4
Date Collected: 01/25/23 12:40								Matri	x: Solie
Date Received: 01/26/23 14:33									
Sample Depth: 4'									
Method: EPA 300.0 - Anions, Ion C	hromatograp	ohy - Soluble	9						
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
Chloride	2490		25.3		mg/Kg			02/02/23 08:59	1
Client Sample ID: BH05							Lab Sar	nple ID: 890-	3963-
Date Collected: 01/25/23 12:50									x: Solio
Date Received: 01/26/23 14:33									
Sample Depth: 4'									
Method: SW846 8021B - Volatile On Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199		0.00199		mg/Kg		02/03/23 12:58	02/05/23 08:20	
Toluene	< 0.00199		0.00199		mg/Kg		02/03/23 12:58	02/05/23 08:20	
Ethylbenzene	< 0.00199		0.00199		mg/Kg		02/03/23 12:58	02/05/23 08:20	
m-Xylene & p-Xylene	< 0.00398		0.00398		mg/Kg		02/03/23 12:58	02/05/23 08:20	
o-Xylene	< 0.00199		0.00199		mg/Kg		02/03/23 12:58	02/05/23 08:20	
Xylenes, Total	<0.00398		0.00398		mg/Kg		02/03/23 12:58	02/05/23 08:20	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	118		70 - 130				02/03/23 12:58	02/05/23 08:20	
1,4-Difluorobenzene (Surr)	114		70 - 130				02/03/23 12:58	02/05/23 08:20	÷
_ Method: TAL SOP Total BTEX - Tot		aulation							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398		0.00398		mg/Kg			02/06/23 12:09	
	-0.00000	0	0.00000		ing/itg			02/00/20 12:00	
Method: SW846 8015 NM - Diesel F	Range Organ	ics (DRO) (O	SC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/10/23 10:33	
_ Method: SW846 8015B NM - Diesel	Range Orga	nics (DRO)	(GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9		49.9		mg/Kg		02/07/23 09:21	02/10/23 00:20	
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 00:20	
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 00:20	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	85		70 - 130				02/07/23 09:21	02/10/23 00:20	
o-Terphenyl	93		70 - 130				02/07/23 09:21	02/10/23 00:20	-
_ Method: EPA 300.0 - Anions, Ion C	hromatograr	hy - Soluble	9						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
							· · ·		

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02/02/23 09:05

Chloride

50.4

mg/Kg

RL

0.00200

0.00200

0.00200

0.00399

0.00200

0.00399

Limits

70 - 130

70 - 130

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

02/03/23 12:58

02/03/23 12:58

02/03/23 12:58

02/03/23 12:58

02/03/23 12:58

02/03/23 12:58

Prepared

02/03/23 12:58

02/03/23 12:58

Job ID: 890-3963-1 SDG: 03A1987062

## **Client Sample ID: BH06**

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 13:00 Date Received: 01/26/23 14:33

Sample Depth: 4'

1,4-Difluorobenzene (Surr)

Analyte

Benzene

Toluene

Client: Ensolum

Lab Sample ID: 890-3963-6

Analyzed

02/05/23 08:41

02/05/23 08:41

02/05/23 08:41

02/05/23 08:41

02/05/23 08:41

02/05/23 08:41

Analyzed

02/05/23 08:41

02/05/23 08:41

Matrix: Solid

963-6	
Solid	
	5
Dil Fac	
1	
1 1	
1	
1 1	8
Dil Fac	9
1 1	
Dil Fac	
1	
Dil Fac	13

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/06/23 12:09	
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	98.6		49.9		mg/Kg			02/10/23 10:33	
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 00:43	
Diesel Range Organics (Over C10-C28)	98.6		49.9		mg/Kg		02/07/23 09:21	02/10/23 00:43	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 00:43	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	89		70 _ 130				02/07/23 09:21	02/10/23 00:43	
o-Terphenyl	94		70 - 130				02/07/23 09:21	02/10/23 00:43	
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solub	le						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	4490	F1	49.7		mg/Kg			02/02/23 09:11	1
Client Sample ID: BH07							Lab Sar	nple ID: 890-	3963-
Date Collected: 01/25/23 13:10								Matri	ix: Soli
Date Received: 01/26/23 14:33									
Sample Depth: 4'									
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC	)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	< 0.00199	U	0.00199		mg/Kg		02/05/23 10:08	02/05/23 15:28	
Toluene	<0.00199	U	0.00199		mg/Kg		02/05/23 10:08	02/05/23 15:28	
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/05/23 10:08	02/05/23 15:28	
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/05/23 10:08	02/05/23 15:28	
, , ,									
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/05/23 10:08	02/05/23 15:28	

Xylenes, Total	<0.00398	U	0.00398	mg/Kg	02/05/23 10:08	02/05/23 15:28	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130		02/05/23 10:08	02/05/23 15:28	1

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Ethylbenzene <0.00200 U\*-\*1 m-Xylene & p-Xylene <0.00399 U\*-\*1 <0.00200 U \*- \*1 o-Xylene Xylenes, Total <0.00399 U\*-\*1 Surrogate %Recovery Qualifier 4-Bromofluorobenzene (Surr) 128

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

Result Qualifier

<0.00200 U \*- \*1

<0.00200 U\*-\*1

93

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	98.6	49.9	mg/Kg			02/10/23 10:33	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 00:43	1
(GRO)-C6-C10									
Diesel Range Organics (Over	98.6		49.9		mg/Kg		02/07/23 09:21	02/10/23 00:43	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 00:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				02/07/23 09:21	02/10/23 00:43	1
o-Terphenyl	94		70 - 130				02/07/23 09:21	02/10/23 00:43	1
o-Terphenyl	94		70 - 130				02/07/23 09:21	02/10/23 00:43	1

Released to Imaging: 2/17/2025 2:02:20 PM

## **Client Sample Results**

Job ID: 890-3963-1 SDG: 03A1987062

Matrix: Solid

5

Lab Sample ID: 890-3963-7

## Client Sample ID: BH07

Project/Site: North Brushy PW Line

Date Collected: 01/25/23 13:10 Date Received: 01/26/23 14:33

Sample Depth: 4'

Client: Ensolum

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

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	96		70 - 130				02/05/23 10:08	02/05/23 15:28	1
Method: TAL SOP Total BTEX - T	otal BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/06/23 12:09	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	577		49.9		mg/Kg			02/10/23 10:33	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(6C)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 01:04	1
(GRO)-C6-C10									
Diesel Range Organics (Over	577		49.9		mg/Kg		02/07/23 09:21	02/10/23 01:04	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:21	02/10/23 01:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130				02/07/23 09:21	02/10/23 01:04	1
o-Terphenyl	104		70 - 130				02/07/23 09:21	02/10/23 01:04	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hv - Solubi	e						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2780		25.3		mg/Kg			02/02/23 09:30	5

#### Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
880-24120-A-2-C MS	Matrix Spike	105	109		
880-24120-A-2-D MSD	Matrix Spike Duplicate	111	109		6
890-3960-A-1-E MS	Matrix Spike	95	108		
890-3960-A-1-F MSD	Matrix Spike Duplicate	74	95		
890-3963-1	BH01	119	112		
890-3963-2	BH02	115	111		8
890-3963-3	BH03	115	112		U
890-3963-4	BH04	102	101		0
890-3963-5	BH05	118	114		3
890-3963-6	BH06	128	93		
890-3963-7	BH07	85	96		
LCS 880-45398/1-A	Lab Control Sample	110	111		
LCS 880-45527/1-A	Lab Control Sample	96	106		
LCSD 880-45398/2-A	Lab Control Sample Dup	106	110		
LCSD 880-45527/2-A	Lab Control Sample Dup	81	99		
MB 880-45349/5-A	Method Blank	105	108		
MB 880-45398/5-A	Method Blank	108	107		
MB 880-45527/5-A	Method Blank	64 S1-	95		
Surrogate Legend					

#### 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

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3961-A-7-D MS	Matrix Spike	109	94
890-3961-A-7-E MSD	Matrix Spike Duplicate	123	103
890-3963-1	BH01	106	104
890-3963-2	BH02	86	92
890-3963-3	BH03	108	107
890-3963-4	BH04	86	94
890-3963-5	BH05	85	93
890-3963-6	BH06	89	94
890-3963-7	BH07	97	104
LCS 880-45658/2-A	Lab Control Sample	105	105
LCSD 880-45658/3-A	Lab Control Sample Dup	95	98
MB 880-45658/1-A	Method Blank	124	126
Surrogate Legend			

#### 1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-3963-1
SDG: 03A1987062

Prep Type: Total/NA

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

											Client Sa	mple ID:	Method	l Blank
Matrix: Solid												Prep 1	Г <mark>уре: Т</mark> с	otal/NA
Analysis Batch: 45308												Prep	Batch:	: 45349
		MB	MB											
Analyte			Qualifier			MDL	Unit		D	P	repared	Analyz	ed	Dil Fac
Benzene	<0.00	0200	U	0.00200	1		mg/Kg	9		02/0	3/23 10:32	02/04/23	13:00	1
Toluene	<0.00	0200	U	0.00200	1		mg/Kg	9		02/0	3/23 10:32	02/04/23	13:00	1
Ethylbenzene	<0.00	0200	U	0.00200			mg/Kg	9		02/0	3/23 10:32	02/04/23	13:00	1
m-Xylene & p-Xylene	<0.00	0400	U	0.00400	1		mg/Kg	9		02/0	3/23 10:32	02/04/23	13:00	1
o-Xylene	<0.00	0200	U	0.00200	1		mg/Kg	9		02/0	3/23 10:32	02/04/23	13:00	1
Xylenes, Total	<0.00	0400	U	0.00400	1		mg/Kg	9		02/0	3/23 10:32	02/04/23	13:00	1
		MB	МВ											
Surrogate	%Reco		Qualifier	Limits						P	repared	Analyz	ed	Dil Fac
4-Bromofluorobenzene (Surr)		105		70 - 130						02/0	3/23 10:32	02/04/23	13:00	1
1,4-Difluorobenzene (Surr)		108		70 - 130						02/0	3/23 10:32	02/04/23	13:00	1
											Client Sa	mple ID:	Method	l Blank
Matrix: Solid												Prep 1	Type: To	otal/NA
Analysis Batch: 45308													Batch:	
-		ΜВ	MB											
Analyte	Re	esult	Qualifier	RL		MDL	Unit		D	Р	repared	Analyz	ed	Dil Fac
Benzene	<0.00	0200	U	0.00200			mg/Kg	3	_	02/0	3/23 12:58	02/05/23	00:35	1
Toluene	<0.00	0200	U	0.00200	1		mg/Kg	3		02/0	3/23 12:58	02/05/23	00:35	1
Ethylbenzene	<0.00	0200	U	0.00200	1		mg/Kg	-		02/0	3/23 12:58	02/05/23	00:35	1
m-Xylene & p-Xylene		0400		0.00400			mg/Kg				3/23 12:58	02/05/23		1
o-Xylene		0200		0.00200			mg/Kg	-			3/23 12:58	02/05/23		1
Xylenes, Total		0400		0.00400			mg/Kg	-			3/23 12:58	02/05/23		1
							5.5	,						
		MB	MB											
Surrogate	%Reco	-	Qualifier	Limits							repared	Analyz		Dil Fac
4-Bromofluorobenzene (Surr)		108		70 - 130							3/23 12:58	02/05/23		1
1,4-Difluorobenzene (Surr)		107		70 - 130						02/0	3/23 12:58	02/05/23	00:35	1
Lab Sample ID: LCS 880-45398/1-A									С	lient	Sample	ID: Lab C	ontrol S	Sample
Matrix: Solid													Type: To	
Analysis Batch: 45308													Batch:	
-				Spike	LCS	LCS	i					%Rec		
Analyte				Added	Result	Qua	lifier	Unit		D	%Rec	Limits		
Benzene				0.100	0.04056	*_		mg/Kg			41	70 - 130		
Toluene				0.100	0.04277			mg/Kg			43	70 - 130		
Ethylbenzene				0.100	0.04505			mg/Kg			45	70 - 130		
m-Xylene & p-Xylene				0.200	0.09694			mg/Kg			48	70 - 130		
o-Xylene				0.100	0.05225			mg/Kg			52	70 - 130		
o Xylono				0.100	0.00220			mg/rtg			02	10-100		
	LCS													
	ecovery	Qua	lifier	Limits										
4-Bromofluorobenzene (Surr)	110			70 - 130										
1,4-Difluorobenzene (Surr)	111			70 - 130										
 Lab Sample ID: LCSD 880-45398/2-/	4							Cli	ient	Sam	ple ID: L	ab Contro	ol Samp	le Dup
Matrix: Solid												Prep 1	Type: To	otal/NA
Analysis Batch: 45308												Prep	Batch:	: <b>4539</b> 8
				Spike	LCSD	LCS	D					%Rec		RPD
Analyte				Spike Added	LCSD Result			Unit		D	%Rec	%Rec Limits	RPD	RPD Limit

5

Job ID: 890-3963-1

SDG: 03A1987062

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-3963-1 SDG: 03A1987062

**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

Prep Type: Total/NA

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

Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 45308	5398/2-A					Clier	nt Sam	ple ID:		ol Sample Type: Tot Batch: 4	tal/NA
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene			0.100	0.07926	*1	mg/Kg		79	70 - 130	60	35
Ethylbenzene			0.100	0.08008	*1	mg/Kg		80	70 - 130	56	35
m-Xylene & p-Xylene			0.200	0.1690	*1	mg/Kg		85	70 - 130	54	35
o-Xylene			0.100	0.08502	*1	mg/Kg		85	70 - 130	48	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								

4-Bromofluorobenzene (Surr)	106	70 - 130
1,4-Difluorobenzene (Surr)	110	70 - 130

#### Lab Sample ID: 880-24120-A-2-C MS Matrix: Solid

#### Analysis Batch: 45308

Analysis Batch: 45308										Batch: 453
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00198	U *- *1	0.0990	0.08419		mg/Kg		85	70 - 130	
Toluene	<0.00198	U *- *1	0.0990	0.07613		mg/Kg		77	70 - 130	
Ethylbenzene	<0.00198	U *- *1	0.0990	0.06992		mg/Kg		71	70 - 130	
m-Xylene & p-Xylene	<0.00396	U *- *1	0.198	0.1521		mg/Kg		77	70 - 130	
o-Xylene	<0.00198	U *- *1	0.0990	0.07369		mg/Kg		74	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

#### Lab Sample ID: 880-24120-A-2-D MSD Matrix: Solid Analysis Batch: 45308

Analysis Batch: 45308									Prep	Batch:	45398
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U *- *1	0.0996	0.08984		mg/Kg		90	70 - 130	6	35
Toluene	<0.00198	U *- *1	0.0996	0.08505		mg/Kg		85	70 - 130	11	35
Ethylbenzene	<0.00198	U *- *1	0.0996	0.07616		mg/Kg		76	70 - 130	9	35
m-Xylene & p-Xylene	<0.00396	U *- *1	0.199	0.1649		mg/Kg		83	70 - 130	8	35
o-Xylene	<0.00198	U *- *1	0.0996	0.07830		mg/Kg		79	70 - 130	6	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

МВ МВ

## Lab Sample ID: MB 880-45527/5-A Matrix: Solid

## Analysis Batch: 45526

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/05/23 10:08	02/05/23 13:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/05/23 10:08	02/05/23 13:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/05/23 10:08	02/05/23 13:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/05/23 10:08	02/05/23 13:43	1

**Eurofins Carlsbad** 

#### **Client Sample ID: Method Blank** Prep Type: Total/NA

**Client Sample ID: Matrix Spike Duplicate** 

Prep Batch: 45527

RL

0.00200

0.00400

Limits

70 - 130

70 - 130

MDL Unit

mg/Kg mg/Kg D

Lab Sample ID: MB 880-45527/5-A

Matrix: Solid

Analyte

o-Xylene

Surrogate

Xylenes, Total

Analysis Batch: 45526

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

MB MB

MB MB %Recovery Qualifier

64

95

S1-

<0.00200 U

<0.00400 U

Result Qualifier

	Job ID: 890	-3963-1
	SDG: 03A1	987062
Client Sa	mple ID: Metho	d Blank
	Prep Type: T	otal/NA
	Prep Batch	1: <b>45527</b>
Prepared	Analyzed	Dil Fac
02/05/23 10:08	02/05/23 13:43	1
02/05/23 10:08 02/05/23 10:08	02/05/23 13:43 02/05/23 13:43	1 1
02/00/20 10:00	02/00/20 10:10	•
02/00/20 10:00	02/00/20 10:10	•
02/05/23 10:08	02/05/23 13:43	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 45527

Lab Sample ID:	LCS	880-45527/1-A
Matrix: Solid		

#### Analysis Batch: 45526

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08150		mg/Kg		82	70 - 130	
Toluene	0.100	0.07937		mg/Kg		79	70 - 130	
Ethylbenzene	0.100	0.07973		mg/Kg		80	70 - 130	
m-Xylene & p-Xylene	0.200	0.1583		mg/Kg		79	70 - 130	
o-Xylene	0.100	0.08259		mg/Kg		83	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

## Lab Sample ID: LCSD 880-45527/2-A

Matrix: Solid Analysis Batch: 45526

#### Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA Prep Batch: 45527

Analysis Datch. 40020							i iep	Daton.	40021
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08638		mg/Kg		86	70 - 130	6	35
Toluene	0.100	0.08534		mg/Kg		85	70 - 130	7	35
Ethylbenzene	0.100	0.08349		mg/Kg		83	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1640		mg/Kg		82	70 - 130	4	35
o-Xylene	0.100	0.08479		mg/Kg		85	70 - 130	3	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	81		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

#### Lab Sample ID: 890-3960-A-1-E MS Matrix: Solid

Analysis Batch: 45526 Prep Batch: 45527 MS MS Spike %Rec Sample Sample Qualifier Added Result Qualifier Analyte Result Unit D %Rec Limits <0.00201 U 0.100 0.1228 123 Benzene 70 - 130 mg/Kg Toluene <0.00201 U 0.100 0.1122 mg/Kg 112 70 - 130 Ethylbenzene <0.00201 U 0.100 0.1024 mg/Kg 102 70 - 130 m-Xylene & p-Xylene <0.00402 U 0.200 0.2174 mg/Kg 108 70 - 130 o-Xylene <0.00201 U 0.100 0.1085 mg/Kg 108 70 - 130

Eurofins Carlsbad

**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA
Client: Ensolum Project/Site: North Brushy PW Line

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

# Lab Sample ID: 890-3960-A-1-E MS

### Matrix: Solid Analysis Batch: 45526

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 _ 130
1,4-Difluorobenzene (Surr)	108		70 - 130

# Lab Sample ID: 890-3960-A-1-F MSD Matrix: Solid

### Analysis Batch: 45526

Analysis Batch: 45526									Prep	Batch:	45527
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	< 0.00201	U	0.0990	0.09271		mg/Kg		94	70 - 130	28	35
Toluene	<0.00201	U	0.0990	0.08533		mg/Kg		86	70 - 130	27	35
Ethylbenzene	<0.00201	U	0.0990	0.08423		mg/Kg		85	70 - 130	19	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1637		mg/Kg		83	70 - 130	28	35
o-Xylene	<0.00201	U	0.0990	0.08138		mg/Kg		82	70 - 130	29	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	74		70 - 130								
1,4-Difluorobenzene (Surr)	95		70 - 130								

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

										011		
Lab Sample ID: MB 880-45658/1-A Matrix: Solid										Client S	ample ID: Metho Prep Type: `	
Analysis Batch: 45831											Prep Batc	h: <mark>4565</mark> 8
	MB	MB										
Analyte	Result	Qualifier	RL		MDL	Unit		D	Р	repared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0			mg/Kg	9		02/0	7/23 09:21	02/09/23 20:17	1
(GRO)-C6-C10												
Diesel Range Organics (Over	<50.0	U	50.0			mg/Kg	9		02/0	7/23 09:21	02/09/23 20:17	1
C10-C28)												
Oll Range Organics (Over C28-C36)	<50.0	U	50.0			mg/Kg	9		02/0	7/23 09:21	02/09/23 20:17	1
	МВ	МВ										
Surrogate	%Recovery	Qualifier	Limits						P	repared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130					_	02/0	7/23 09:21	02/09/23 20:17	1
o-Terphenyl	126		70 - 130						02/0	7/23 09:21	02/09/23 20:17	1
- Lab Sample ID: LCS 880-45658/2-A								CI	ient	Sample	ID: Lab Control	Sample
Matrix: Solid											Prep Type:	
Analysis Batch: 45831											Prep Batc	
Analysis Batem 40001			Spike	LCS	LCS						%Rec	
Analyte			Added	Result	Qual	ifier	Unit		D	%Rec	Limits	
Gasoline Range Organics			1000	885.3			mg/Kg		_	89	70 - 130	
(GRO)-C6-C10												

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	105		70 - 130

Prep Type: Total/NA

### **Client Sample ID: Matrix Spike** Prep Type: Total/NA Prep Batch: 45527

**Client Sample ID: Matrix Spike Duplicate** 

Diesel Range Organics (Over

C10-C28)

1000

909.8

mg/Kg

91

70 - 130

Job ID: 890-3963-1 SDG: 03A1987062

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

Lab Sample ID: LCSD 880-45	658/3-A					Clier	nt Sam	ple ID: I	_ab Contro	I Sampl	e Dup
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 45831									Prep	Batch:	4 <b>565</b> 8
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	871.4		mg/Kg		87	70 - 130	2	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	824.8		mg/Kg		82	70 - 130	10	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	95		70 - 130								
o-Terphenyl	98		70 - 130								
								Olivert	O annual a ID		0
Lab Sample ID: 890-3961-A-7								Client	Sample ID		
Matrix: Solid										Type: To	
Analysis Batch: 45831										Batch:	45658
	•	Sample	Spike		MS		_		%Rec		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9	U	999	902.9		mg/Kg		88	70 - 130		
(GRO)-C6-C10 Diesel Range Organics (Over	97.8		999	867.4		mg/Kg		77	70 - 130		
C10-C28)	97.0		999	007.4		mg/Kg			70 - 130		
010-020)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	109		70 - 130								
o-Terphenyl	94		70 - 130								
- Lab Sample ID: 890-3961-A-7						CI	iont Sa		: Matrix Sp	oiko Dur	licato
Matrix: Solid						01				Type: To	
Analysis Batch: 45831										Batch:	
Analysis Batch. 43031	Sample	Sample	Spike	MSD	MSD				%Rec	Datch.	RPD
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
								108	70 - 130	20	
Gasoline Range Organics	<49.9	U	1000	1103		mg/Kg		100	10 - 100	20	20
		U	1000	1103		ilig/Kg		100	70 - 150	20	20
Gasoline Range Organics		U	1000 1000	952.5		mg/Kg		85	70 - 130	9	20
Gasoline Range Organics (GRO)-C6-C10	<49.9	U									
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<49.9										
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<49.9 97.8	MSD									
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.9 97.8 <b>MSD</b>	MSD	1000								

### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45078/1-A Matrix: Solid Analysis Batch: 45243							Client S	ample ID: Metho Prep Type:	
-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/01/23 13:13	1

Project/Site: North Brushy PW Line

Client: Ensolum

### Job ID: 890-3963-1 SDG: 03A1987062

Method: 300.0 - Anions, Ion Chromatography (Continued)

_ Lab Sample ID: LCS 880-45078/	2-A						Client	Sample	e ID: Lab C	ontrol S	ample
Matrix: Solid										Type: S	
Analysis Batch: 45243											
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	252.0		mg/Kg		101	90 - 110		
Lab Sample ID: LCSD 880-4507	8/3-A					Clie	nt Sam	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid										Type: S	
Analysis Batch: 45243											
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	252.0		mg/Kg		101	90 - 110	0	20
 Lab Sample ID: 890-3963-6 MS									Client Sa	mple ID:	BH06
Matrix: Solid									Prep	· Type: S	oluble
Analysis Batch: 45243											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	4490	F1	2490	7880	F1	mg/Kg		137	90 - 110		
 Lab Sample ID: 890-3963-6 MSI	5								Client Sa	mple ID:	BH06
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 45243											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4490	F1	2490	7889	F1	mg/Kg		137	90 - 110	0	20

Client: Ensolum Project/Site: North Brushy PW Line

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### Job ID: 890-3963-1 SDG: 03A1987062

# GC VOA

### Analysis Batch: 45308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3963-1	BH01	Total/NA	Solid	8021B	45398
890-3963-2	BH02	Total/NA	Solid	8021B	45398
890-3963-3	BH03	Total/NA	Solid	8021B	45398
890-3963-4	BH04	Total/NA	Solid	8021B	45398
890-3963-5	BH05	Total/NA	Solid	8021B	45398
890-3963-6	BH06	Total/NA	Solid	8021B	45398
MB 880-45349/5-A	Method Blank	Total/NA	Solid	8021B	45349
MB 880-45398/5-A	Method Blank	Total/NA	Solid	8021B	45398
LCS 880-45398/1-A	Lab Control Sample	Total/NA	Solid	8021B	45398
LCSD 880-45398/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45398
880-24120-A-2-C MS	Matrix Spike	Total/NA	Solid	8021B	45398
880-24120-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45398
Prep Batch: 45349					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-45349/5-A	Method Blank	Total/NA	Solid	5035	

# Prep Batch: 45398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3963-1	BH01	Total/NA	Solid	5035	
890-3963-2	BH02	Total/NA	Solid	5035	
890-3963-3	BH03	Total/NA	Solid	5035	
890-3963-4	BH04	Total/NA	Solid	5035	
890-3963-5	BH05	Total/NA	Solid	5035	
890-3963-6	BH06	Total/NA	Solid	5035	
MB 880-45398/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45398/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45398/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24120-A-2-C MS	Matrix Spike	Total/NA	Solid	5035	
880-24120-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 45526

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3963-7	BH07	Total/NA	Solid	8021B	45527
MB 880-45527/5-A	Method Blank	Total/NA	Solid	8021B	45527
LCS 880-45527/1-A	Lab Control Sample	Total/NA	Solid	8021B	45527
LCSD 880-45527/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45527
890-3960-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	45527
890-3960-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45527

### Prep Batch: 45527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3963-7	BH07	Total/NA	Solid	5035	
MB 880-45527/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45527/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45527/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3960-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-3960-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

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Client: Ensolum Project/Site: North Brushy PW Line

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### Job ID: 890-3963-1 SDG: 03A1987062

GC VOA

# Analysis Batch: 45594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3963-1	BH01	Total/NA	Solid	Total BTEX	
890-3963-2	BH02	Total/NA	Solid	Total BTEX	
890-3963-3	BH03	Total/NA	Solid	Total BTEX	
890-3963-4	BH04	Total/NA	Solid	Total BTEX	
890-3963-5	BH05	Total/NA	Solid	Total BTEX	
890-3963-6	BH06	Total/NA	Solid	Total BTEX	
890-3963-7	BH07	Total/NA	Solid	Total BTEX	

### GC Semi VOA

### Prep Batch: 45658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3963-1	BH01	Total/NA	Solid	8015NM Prep	
890-3963-2	BH02	Total/NA	Solid	8015NM Prep	
890-3963-3	BH03	Total/NA	Solid	8015NM Prep	
890-3963-4	BH04	Total/NA	Solid	8015NM Prep	
890-3963-5	BH05	Total/NA	Solid	8015NM Prep	
890-3963-6	BH06	Total/NA	Solid	8015NM Prep	
890-3963-7	BH07	Total/NA	Solid	8015NM Prep	
MB 880-45658/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45658/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3961-A-7-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3961-A-7-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 45831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3963-1	BH01	Total/NA	Solid	8015B NM	45658
890-3963-2	BH02	Total/NA	Solid	8015B NM	45658
890-3963-3	BH03	Total/NA	Solid	8015B NM	45658
890-3963-4	BH04	Total/NA	Solid	8015B NM	45658
890-3963-5	BH05	Total/NA	Solid	8015B NM	45658
890-3963-6	BH06	Total/NA	Solid	8015B NM	45658
890-3963-7	BH07	Total/NA	Solid	8015B NM	45658
MB 880-45658/1-A	Method Blank	Total/NA	Solid	8015B NM	45658
LCS 880-45658/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45658
LCSD 880-45658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45658
890-3961-A-7-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45658
890-3961-A-7-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45658

### Analysis Batch: 45969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3963-1	BH01	Total/NA	Solid	8015 NM	
890-3963-2	BH02	Total/NA	Solid	8015 NM	
890-3963-3	BH03	Total/NA	Solid	8015 NM	
890-3963-4	BH04	Total/NA	Solid	8015 NM	
890-3963-5	BH05	Total/NA	Solid	8015 NM	
890-3963-6	BH06	Total/NA	Solid	8015 NM	
890-3963-7	BH07	Total/NA	Solid	8015 NM	

Client: Ensolum Project/Site: North Brushy PW Line

### Job ID: 890-3963-1 SDG: 03A1987062

# HPLC/IC

# Leach Batch: 45078

each Batch: 45078					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3963-1	BH01	Soluble	Solid	DI Leach	_ <u> </u>
890-3963-2	BH02	Soluble	Solid	DI Leach	
890-3963-3	BH03	Soluble	Solid	DI Leach	
890-3963-4	BH04	Soluble	Solid	DI Leach	
890-3963-5	BH05	Soluble	Solid	DI Leach	
890-3963-6	BH06	Soluble	Solid	DI Leach	
890-3963-7	BH07	Soluble	Solid	DI Leach	
MB 880-45078/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45078/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45078/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3963-6 MS	BH06	Soluble	Solid	DI Leach	
890-3963-6 MSD	BH06	Soluble	Solid	DI Leach	

### Analysis Batch: 45243

090-3903-7	BHU/	Soluble	Solid	Di Leach		
MB 880-45078/1-A	Method Blank	Soluble	Solid	DI Leach		8
LCS 880-45078/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-45078/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		9
890-3963-6 MS	BH06	Soluble	Solid	DI Leach		
890-3963-6 MSD	BH06	Soluble	Solid	DI Leach		
Analysis Batch: 45243	ł					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-3963-1	BH01	Soluble	Solid	300.0	45078	
890-3963-2	BH02	Soluble	Solid	300.0	45078	
890-3963-3	BH03	Soluble	Solid	300.0	45078	4.9
890-3963-4	BH04	Soluble	Solid	300.0	45078	13
890-3963-5	BH05	Soluble	Solid	300.0	45078	
890-3963-6	BH06	Soluble	Solid	300.0	45078	
890-3963-7	BH07	Soluble	Solid	300.0	45078	
MB 880-45078/1-A	Method Blank	Soluble	Solid	300.0	45078	
LCS 880-45078/2-A	Lab Control Sample	Soluble	Solid	300.0	45078	
LCSD 880-45078/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45078	
890-3963-6 MS	BH06	Soluble	Solid	300.0	45078	
890-3963-6 MSD	BH06	Soluble	Solid	300.0	45078	

Project/Site: North Brushy PW Line

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Job ID: 890-3963-1 SDG: 03A1987062

# Lab Sample ID: 890-3963-1 Matrix: Solid

Lab Sample ID: 890-3963-2

Lab Sample ID: 890-3963-3

Lab Sample ID: 890-3963-4

Matrix: Solid

Matrix: Solid

Date Collected: 01/25/23 12:10 Date Received: 01/26/23 14:33

**Client Sample ID: BH01** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45398	02/03/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45308	02/05/23 06:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45594	02/06/23 12:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45969	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/09/23 22:52	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		20			45243	02/02/23 08:40	СН	EET MID

# **Client Sample ID: BH02**

# Date Collected: 01/25/23 12:20

Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	45398	02/03/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45308	02/05/23 07:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45594	02/06/23 12:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45969	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/09/23 23:14	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		1			45243	02/02/23 08:46	СН	EET MID

# **Client Sample ID: BH03**

# Date Collected: 01/25/23 12:30

Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	45398	02/03/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45308	02/05/23 07:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45594	02/06/23 12:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45969	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/09/23 23:36	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		10			45243	02/02/23 08:52	СН	EET MID

### **Client Sample ID: BH04** Date Collected: 01/25/23 12:40 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	45398	02/03/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45308	02/05/23 08:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45594	02/06/23 12:09	AJ	EET MID

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Matrix: Solid

Project/Site: North Brushy PW Line

Job ID: 890-3963-1 SDG: 03A1987062

# Lab Sample ID: 890-3963-4 Matrix: Solid

Lab Sample ID: 890-3963-5

Date Collected: 01/25/23 12:40 Date Received: 01/26/23 14:33

**Client Sample ID: BH04** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			45969	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/09/23 23:58	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		5			45243	02/02/23 08:59	СН	EET MID

# Client Sample ID: BH05

### Date Collected: 01/25/23 12:50 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	45398	02/03/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45308	02/05/23 08:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45594	02/06/23 12:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45969	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 00:20	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		10			45243	02/02/23 09:05	СН	EET MID

### **Client Sample ID: BH06**

Date Collected: 01/25/23 13:00 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45398	02/03/23 12:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45308	02/05/23 08:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45594	02/06/23 12:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45969	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 00:43	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		10			45243	02/02/23 09:11	CH	EET MID

### **Client Sample ID: BH07**

### Date Collected: 01/25/23 13:10 Date Received: 01/26/23 14:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	45527	02/05/23 10:08	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45526	02/05/23 15:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45594	02/06/23 12:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45969	02/10/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45658	02/07/23 09:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45831	02/10/23 01:04	SM	EET MID

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Matrix: Solid

> 11 12 13

Lab Sample ID: 890-3963-6

Lab Sample ID: 890-3963-7

Matrix: Solid

Matrix: Solid

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# Lab Chronicle

Job ID: 890-3963-1 SDG: 03A1987062

### **Client Sample ID: BH07** Date Collected: 01/25/23 13:10 Date Received: 01/26/23 14:33

Project/Site: North Brushy PW Line

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	45078	01/30/23 15:51	KS	EET MID
Soluble	Analysis	300.0		5			45243	02/02/23 09:30	CH	EET MID

### Laboratory References:

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

## Lab Sample ID: 890-3963-7 Matrix: Solid

Eurofins Carlsbad

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		Accreditation/Co	ertification Summary		
Client: Ensolum Project/Site: North Brus	shy PW Line			Job ID: 890-3963-1 SDG: 03A1987062	2
Laboratory: Eurofin Unless otherwise noted, all ar		were covered under each acci	reditation/certification below.		
Authority		Program	Identification Number	Expiration Date	
Texas		NELAP	T104704400-22-25 ed by the governing authority. This list ma	06-30-23	5
the agency does not off Analysis Method		Matrix	Analyte		6
8015 NM Total BTEX		Solid Solid	Total TPH Total BTEX		
_					8
					9
					10
					13

# **Method Summary**

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-3963-1 SDG: 03A1987062

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	EPA	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 Refe	rences:		
ASTM = A	STM International		
EPA = US	Environmental Protection Agency		
SW846 = '	'Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition	n, November 1986 And Its Updates.	
TAL SOP :	<ul> <li>TestAmerica Laboratories, Standard Operating Procedure</li> </ul>		
Laboratory Re			
EET MID =	Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

Job ID: 890-3963-1 SDG: 03A1987062

		co	Environment Testing Xenco	sting	H EI -	lland, TX L Paso, obbs, NI	17 (432) 71 ( (432) 71 ( (915) M (575) ;	) 240-14 04-5440 585-34 392-755	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	onio, TX ock, TX ( ad, NM (	( (210) 5 (806) 79 (575) 98	09-3334 4-1296 3-3199				V	ork O	Work Order No:	No:			-	
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	Encolum				Company Name:	ame.	WPX	×						Prog	am: U	STIPS			rownf	ields	RRC	s	Program: UST/PST PRP Brownfields RRC Superfund
Technic.	3100 National Parks HWV	ke HW	<		Address:		531	5 Buena	5315 Buena Vista Dr.	Ť				State	State of Project:	ject:	١	1					
		20110				5	2	abad N	NA 0000					Repo	rtina: L	evel II	Leve	Ē	PSTA	Reporting: Level III TLevel III PST/UST TRRP	TRR		
City, State ZIP: Car	Carlsbad, NM 88220	20			City, State ZIP:	7	Can	sbad, N	Carisbad, NM 88220	C					e e		<u>ן</u>	2 [				5	
Phone: 832	832-541-7719			Email:	Email: gmoreno@Ensolum.com,	Ensolu	Im.com	N	im.raley@dvn.com	vn.com				Delive	Deliverables: EDD	EDD	[	A	AUaP1		Other		
Name:	North Brushy PW Line	Line		Turn	Turn Around						A	ANALYSIS REQUEST	IS REO	QUEST						Pr	eserv	ative	Preservative Codes
ä	03A1987062			Routine	Rush	Pres. Code	de de												-	None: NO	õ	D	DI Water: H <sub>2</sub> O
Project Location: Edd	Eddy, NM			Due Date:	5 Day TAT														0	Cool: Cool	00	Me	MeOH: Me
	Gilbert Moreno			TAT starts the	TAT starts the day received by	by													- <del></del>	HCL: HC	. c	Ţ	HNO3: HN
	9001900347			the lab, if rec	the lab, if received by 4:30pm											-	_			H <sub>2</sub> SU <sub>4</sub> : H <sub>2</sub>	H <sub>2</sub>	No	NaOH: Na
SAMPLE RECEIPT	Temp Blank:		Yes) No	Wet Ice:	Yes No	nete														H <sub>3</sub> PO <sub>4</sub> : HP	ŦP	5	
Samples Received Intact:	Kes N		Thermometer ID:	r ID:	TAMO	R.														NaHSUA: NABIS	A: NAE		
Cooler Custody Seals:	No	-	Correction Factor:	actor:	0.0	17 P					IIIIIII	HIMIN	No. 10					_		7n AnatataNaOH: 7n	ator No	DH- Z	7
Total Containers:	Tes NO		Corrected Temperature	Corrected Temperature:	1.1	7	DES	5)	)21				Chain of Custody	rstody	Ĩ		ļ		7	VaOH+	Ascorb	pic Aci	NaOH+Ascorbic Acid: SAPC
Sample Identification		Matrix s	Date Sampled	Time Sampled	Depth Gr	Grab/ # of Comp Cont		TPH (80	BTEX (8											S	ample	Com	Sample Comments
BH01		S 01	01.25.23		4' Gr	Grab/ 1		×	×														
BH02		S  01	01.25.23	12:20	4' Gr	Grab/ 1	×	×	×														
BH03		S  01	01.25.23	12:30	4' Gr	Grab/ 1	×	×	×												Inc	Incident ID	D
BH04		S  01	01.25.23	12:40	4' Gr	Grab/ 1	×	×	×				-								nAPP2231126594	2311	26594
BH05		S  01	01.25.23	12:50	4' Gr	Grab/ 1	×	×	×			-	-										
BH06		S 01	01.25.23	13:00	4' Gr	Grab/ 1	×	×	×				-										
BH07		S 01	01.25.23	13:10	4' Gr	Grab/ 1	×	×	×		-	-	+-										
		2				1																	
		5	Kin																				
		1				-	$\vdash$				-	-	-	F									
Total 200.7 / 6010	200.8 / 6020:			8RCRA 13P	13PPM Texas	11 A	SP SP	As Ba	p õ	Cd Ca	B Or O	Co Cu	Fe Pb	Mg N	Mg Mn Mo Ni	Mo Ni K	Se /	Ig Sic	Ag SiO <sub>2</sub> Na	Sr TI	1 Sn U	U V 2	Zn Zn
Notce: Signature of this document and relinguishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	ment and relinguish	ment of s	amples cons	titutes a valid j	ULES a valid purchase order from clien	from clie	ant comp	any to Euro	urofins Xe	Xenco, Its affilia	filiates	tes and subcontractors. It assigns st	Intractors	s. It assig	Ins stan	dard ten	ns and	ondition	S	conditions			
provide any advice of the second s	I be liable only for t n charge of \$85.00 v	he cost of vill be app	f samples an fied to each	d shall not assi project and a c	Ime any respor harge of \$5 for	nsibility f each sar	or any lo npie subi	sses or e mitted to	xpenses Eurofins	ncurred Xenco, b	by the cli ut not an	- ÷	h losses. Iese term	ch losses are due to circumstances beyond the control hese terms will be enforced unless previously negotiated.	o circum enforceo	stances l unless	beyond	the cont	rol tiated.				
Relinquished by: (Signature)	ignature)		Received	Received by: (Signature)	ture)	_	Dat	Date/Time		Rel	Relinquished	~	(Signature)	ture)		Rece	ived b	V: (Sig	Received by: (Signature)			Date	Date/Time
· ( Joing	2	Acc	ree	ia x-	lig	/	-26	نو	41 8	22													
3					/					4											-		

5

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Job Number: 890-3963-1 SDG Number: 03A1987062

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

### Login Number: 3963 List Number: 1 Creator: Stutzman, Amanda

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

<6mm (1/4").

Login Number: 3963 List Number: 2 Creator: Rodriguez, Leticia

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	N/A	

Job Number: 890-3963-1 SDG Number: 03A1987062

List Source: Eurofins Midland List Creation: 01/30/23 09:34 AM

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Eurofins Carlsbad Released to Imaging: 2/17/2025 2:02:20 PM Received by OCD: 4/15/2024 2:04:17 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Devon Team Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 2/13/2023 7:39:09 PM

# JOB DESCRIPTION

NORTH BRUSHY PW LINE SDG NUMBER 03A1987062

# **JOB NUMBER**

890-4053-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

Received by OCD: 4/15/2024 2:04:17 PM

# **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

RAMER

Generated 2/13/2023 7:39:09 PM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Laboratory Job ID: 890-4053-1 SDG: 03A1987062

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Sample Summary	21
Chain of Custody	22
	23

served by OC	UD: 4/15/2024 2:04:1/ PM	Page 103 0f 5	340
	Definitions/Glossary		
Client: Ensolu		Job ID: 890-4053-1	
Project/Site: /	NORTH BRUSHY PW LINE	SDG: 03A1987062	
Qualifiers			
GC VOA			
Qualifier	Qualifier Description		
*-	LCS and/or LCSD is outside acceptance limits, low biased.		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VO	A		
Qualifier	Qualifier Description		
*_	LCS and/or LCSD is outside acceptance limits, low biased.		
*1	LCS/LCSD RPD exceeds control limits.		
F1	MS and/or MSD recovery exceeds control limits.		
S1-	Surrogate recovery exceeds control limits, low biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
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		

# 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

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Job ID: 890-4053-1 SDG: 03A1987062

### Job ID: 890-4053-1

### Laboratory: Eurofins Carlsbad

### Narrative

Job Narrative 890-4053-1

### Receipt

The samples were received on 2/7/2023 4:03 PM. 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 1.0°C

### **Receipt Exceptions**

The following were received and analyzed from an unpreserved bulk soil jar: PH01 (890-4053-1), PH01 (890-4053-2), PH02 (890-4053-3), PH02 (890-4053-4) and PH03 (890-4053-5).

### GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-46016 and analytical batch 880-46059 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH01 (890-4053-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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: Surrogate recovery for the following samples were outside control limits: PH01 (890-4053-1), PH01 (890-4053-2), PH02 (890-4053-3), PH02 (890-4053-4), PH03 (890-4053-5), (890-4049-A-1-B), (890-4049-A-1-C MS) and (890-4049-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: LCS biased low. Since only an acceptable LCS or LCSD is required per the method, the data has been qualified and reported.(LCS 880-45928/2-A)

Method 8015MOD NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-45928 and analytical batch 880-46064. The associated laboratory control sample (LCS) met acceptance criteria.

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

### HPLC/IC

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-45902 and analytical batch 880-45920 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

02/10/23 14:55

02/10/23 14:55

02/10/23 14:55

02/10/23 14:55

02/10/23 14:55

02/10/23 14:55

Job ID: 890-4053-1 SDG: 03A1987062

# **Client Sample ID: PH01**

Date Collected: 02/07/23 09:00 Date Received: 02/07/23 16:03

Sample Depth: 4

Client: Ensolum

Lab Sample ID: 890-4053-1

Analyzed

02/11/23 22:38

02/11/23 22:38

02/11/23 22:38

02/11/23 22:38

02/11/23 22:38

02/11/23 22:38

Analyzed

Lab Sample ID: 890-4053-2

Matrix: Solid

Matrix: Solid

0.00L	
053-1 Solid	
	4
	5
Dil Fac 1	6
1 1 1	7
1 1	8
Dil Fac	9
1 1	10
Dil Fac	11
1	12
Dil Fac	13
1	4.4

Analyte	Result	Qualifier	RL
Benzene	< 0.00199	U	0.00199
Toluene	<0.00199	U *-	0.00199
Ethylbenzene	<0.00199	U *-	0.00199
m-Xylene & p-Xylene	<0.00398	U	0.00398
o-Xylene	<0.00199	U	0.00199
Xylenes, Total	< 0.00398	U	0.00398

Surrogate %Recovery Qualifier Limits Prepared 131 S1+ 70 - 130 02/10/23 14:55 02/11/23 22:38 4-Bromofluorobenzene (Surr) 70 - 130 02/10/23 14:55 1,4-Difluorobenzene (Surr) 106 02/11/23 22:38

T	Method: TAL SOP Total BTEX - Tota	al BTEX Calc	ulation						
	Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
l	Total BTEX	<0.00398	U	0.00398	mg/Kg			02/13/23 19:39	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/K			02/13/23 17:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 17:42	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 17:42	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/09/23 17:25	02/12/23 17:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	1	S1-	70 - 130				02/09/23 17:25	02/12/23 17:42	1
o-Terphenyl	0.8	S1-	70 - 130				02/09/23 17:25	02/12/23 17:42	1

Method: EPA 300.0 - Anions, Ion C	hromatography - Soluble						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4720	49.7	mg/Kg			02/09/23 20:22	10

### **Client Sample ID: PH01** Date Collected: 02/07/23 09:30 Date Received: 02/07/23 16:03

Sample Depth: 12

Method: SW846 8021B - Volat	ile Organic Comp	ounds (GC)	)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 22:59	1
Toluene	<0.00200	U *-	0.00200		mg/Kg		02/10/23 14:55	02/11/23 22:59	1
Ethylbenzene	<0.00200	U *-	0.00200		mg/Kg		02/10/23 14:55	02/11/23 22:59	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/10/23 14:55	02/11/23 22:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 22:59	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/10/23 14:55	02/11/23 22:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130				02/10/23 14:55	02/11/23 22:59	1

# **Client Sample Results**

Job ID: 890-4053-1 SDG: 03A1987062

Matrix: Solid

5

Lab Sample ID: 890-4053-2

Lab Sample ID: 890-4053-3

Matrix: Solid

# **Client Sample ID: PH01**

Date Collected: 02/07/23 09:30 Date Received: 02/07/23 16:03

Sample Depth: 12

Client: Ensolum

### ... athad, SW946 9024 B Valatila Organia Compour

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	105		70 - 130				02/10/23 14:55	02/11/23 22:59	1
Method: TAL SOP Total BTEX - T	otal BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/13/23 19:39	
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH Method: SW846 8015B NM - Dies	<50.0		50.0		mg/Kg			02/13/23 17:59	
					mg/Kg			02/13/23 17:59	
Method: SW846 8015B NM - Dies Analyte	sel Range Orga Result	nics (DRO) Qualifier	(GC)	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	sel Range Orga Result	nics (DRO)	(GC)	MDL		<u>D</u>	Prepared 02/09/23 17:25		Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics GRO)-C6-C10	el Range Orga Result <50.0	nics (DRO) Qualifier U *- *1	(GC) 	MDL	Unit mg/Kg	<u>D</u>	02/09/23 17:25	Analyzed 02/12/23 18:04	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	el Range Orga Result <50.0	nics (DRO) Qualifier	(GC)	MDL	Unit	<u>D</u>	·	Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	el Range Orga Result <50.0	nics (DRO) Qualifier U *- *1 U *- *1	(GC) 	MDL	Unit mg/Kg	<u> </u>	02/09/23 17:25	Analyzed 02/12/23 18:04	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga 	<b>nics (DRO)</b> Qualifier U *- *1 U *- *1 U	(GC) <u>RL</u> 50.0 50.0	MDL	Unit mg/Kg mg/Kg	<u>D</u>	02/09/23 17:25	Analyzed 02/12/23 18:04 02/12/23 18:04	Dil Fac
Method: SW846 8015B NM - Dies Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36)	sel Range Orga <u>Result</u> <50.0 <50.0 <50.0	<b>nics (DRO)</b> Qualifier U *- *1 U *- *1 U	(GC) <u>RL</u> 50.0 50.0 50.0	MDL	Unit mg/Kg mg/Kg	<u>D</u>	02/09/23 17:25 02/09/23 17:25 02/09/23 17:25	Analyzed 02/12/23 18:04 02/12/23 18:04 02/12/23 18:04	

# Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	)	Prepared	Analyzed	Dil Fac
Chloride	6400		50.4		mg/Kg			02/09/23 20:28	10

### **Client Sample ID: PH02**

Date Collected: 02/07/23 10:00 Date Received: 02/07/23 16:03 Sample Depth: 5

### Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Benzene <0.00198 U 0.00198 mg/Kg 02/10/23 14:55 02/11/23 23:19 1 Toluene <0.00198 U\*-0.00198 02/10/23 14:55 02/11/23 23:19 mg/Kg 1 Ethylbenzene <0.00198 U\*-0.00198 mg/Kg 02/10/23 14:55 02/11/23 23:19 1 m-Xylene & p-Xylene <0.00396 U 0.00396 02/10/23 14:55 02/11/23 23:19 mg/Kg 1 o-Xylene <0.00198 U 0.00198 mg/Kg 02/10/23 14:55 02/11/23 23:19 1 Xylenes, Total <0.00396 U 0.00396 mg/Kg 02/10/23 14:55 02/11/23 23:19 1 %Recovery Qualifier Limits Dil Fac Surrogate Prepared Analyzed 70 - 130 02/10/23 14:55 4-Bromofluorobenzene (Surr) 127 02/11/23 23:19 1 1,4-Difluorobenzene (Surr) 103 70 - 130 02/10/23 14:55 02/11/23 23:19 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL MDL Unit D Dil Fac Prepared Analyzed Total BTEX <0.00396 U 0.00396 02/13/23 19:39 mg/Kg 1 Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Total TPH

	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Н	<49.9	U	49.9	mg/Kg			02/13/23 17:59	1

Job ID: 890-4053-1 SDG: 03A1987062

Matrix: Solid

5

Lab Sample ID: 890-4053-3

Lab Sample ID: 890-4053-4

Matrix: Solid

# **Client Sample ID: PH02**

Date Collected: 02/07/23 10:00 Date Received: 02/07/23 16:03

Sample Depth: 5

Client: Ensolum

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 18:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 18:26	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/09/23 17:25	02/12/23 18:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	1	S1-	70 - 130				02/09/23 17:25	02/12/23 18:26	1
o-Terphenyl	0.6	S1-	70 - 130				02/09/23 17:25	02/12/23 18:26	1

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4930	49.9	mg/Kg			02/09/23 20:34	10

### **Client Sample ID: PH02**

### Date Collected: 02/07/23 10:30

Date Received: 02/07/23 16:03

Sample	Depth:	10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/10/23 14:55	02/11/23 23:40	1
Toluene	<0.00201	U *-	0.00201		mg/Kg		02/10/23 14:55	02/11/23 23:40	1
Ethylbenzene	<0.00201	U *-	0.00201		mg/Kg		02/10/23 14:55	02/11/23 23:40	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/10/23 14:55	02/11/23 23:40	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/10/23 14:55	02/11/23 23:40	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/10/23 14:55	02/11/23 23:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130				02/10/23 14:55	02/11/23 23:40	1
1,4-Difluorobenzene (Surr)	107		70 - 130				02/10/23 14:55	02/11/23 23:40	1

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/K	g		02/13/23 19:39	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			02/13/23 17:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 18:47	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 18:47	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/09/23 17:25	02/12/23 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	0.6	S1-	70 - 130				02/09/23 17:25	02/12/23 18:47	1
o-Terphenyl	0.3	S1-	70 - 130				02/09/23 17:25	02/12/23 18:47	1

		Client	Sample R	Results	;				
Client: Ensolum Project/Site: NORTH BRUSHY PV								Job ID: 890 SDG: 03A1	
-							Lab Car		
Client Sample ID: PH02							Lab San	nple ID: 890-	4053- ix: Soli
Date Collected: 02/07/23 10:30 Date Received: 02/07/23 16:03								watri	x: 501
Sample Depth: 10									
Method: EPA 300.0 - Anions, Ior		-				_	<b>.</b> .		
Analyte Chloride	Kesuit	Qualifier		MDL	Unit mg/Kg	D	Prepared	Analyzed 02/09/23 20:40	Dil Fa
	5590		43.0		ilig/itg			02/03/23 20.40	
Client Sample ID: PH03							Lab San	nple ID: 890-	4053-
Date Collected: 02/07/23 11:00								Matri	ix: Soli
Date Received: 02/07/23 16:03									
Sample Depth: 12									
_ Method: SW846 8021B - Volatile	Organia Comp	ounde (CC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201		0.00201		mg/Kg		02/10/23 14:55	02/12/23 00:00	
Toluene	< 0.00201		0.00201		mg/Kg		02/10/23 14:55	02/12/23 00:00	
Ethylbenzene	<0.00201		0.00201		mg/Kg		02/10/23 14:55	02/12/23 00:00	
m-Xylene & p-Xylene	<0.00402		0.00402		mg/Kg		02/10/23 14:55	02/12/23 00:00	
o-Xylene	<0.00201		0.00201		mg/Kg		02/10/23 14:55	02/12/23 00:00	
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/10/23 14:55	02/12/23 00:00	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)		Quanner	70 - 130				02/10/23 14:55	02/12/23 00:00	
1,4-Difluorobenzene (Surr)	109		70 - 130				02/10/23 14:55	02/12/23 00:00	
	100		101100				02,10,20 11.00	02,72,20,00.00	
Method: TAL SOP Total BTEX -	Total BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	< 0.00402	U	0.00402		mg/Kg			02/13/23 19:39	
-									
Method: SW846 8015 NM - Dies						_			
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0		mg/Kg			02/13/23 17:59	
Method: SW846 8015B NM - Die	esel Range Orga	nics (DRO) (	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *- *1	50.0		mg/Kg		02/09/23 17:25	02/12/23 19:09	
Diesel Range Organics (Over C10-C28)	<50.0	U *- *1	50.0		mg/Kg		02/09/23 17:25	02/12/23 19:09	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/09/23 17:25	02/12/23 19:09	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctane	0.08		70 - 130				02/09/23 17:25	02/12/23 19:09	
o-Terphenyl		S1-	70 - 130				02/09/23 17:25	02/12/23 19:09	
-									
Method: EPA 300.0 - Anions, Ion Analyte		ohy - Soluble Qualifier	RI		Unit	п	Prenared	Analyzed	Dil Fa
Audivie	Result	Juanner	RI		1 ITHIT		Prepareo	Analyzen	1111 F

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac			
Chloride	4010	49.6	mg/Kg			02/09/23 20:47	10			

### Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

-			
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4047-A-1-C MS	Matrix Spike	113	112
890-4047-A-1-D MSD	Matrix Spike Duplicate	109	112
890-4053-1	PH01	131 S1+	106
890-4053-2	PH01	120	105
890-4053-3	PH02	127	103
890-4053-4	PH02	128	107
890-4053-5	PH03	122	109
LCS 880-46016/1-A	Lab Control Sample	108	110
LCSD 880-46016/2-A	Lab Control Sample Dup	114	110
MB 880-46016/5-A	Method Blank	111	105
Surrogate Legend			

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

				Percent Surrogate Recovery (
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-4049-A-1-C MS	Matrix Spike	2 S1-	0.4 S1-	
390-4049-A-1-D MSD	Matrix Spike Duplicate	2 S1-	0.6 S1-	
890-4053-1	PH01	1 S1-	0.8 S1-	
890-4053-2	PH01	1 S1-	0.6 S1-	
890-4053-3	PH02	1 S1-	0.6 S1-	
890-4053-4	PH02	0.6 S1-	0.3 S1-	
390-4053-5	PH03	0.08 S1-	0.5 S1-	
_CS 880-45928/2-A	Lab Control Sample	81	83	
LCSD 880-45928/3-A	Lab Control Sample Dup	93	100	
MB 880-45928/1-A	Method Blank	87	105	

### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

Prep Type: Total/NA

Client: Ensolum Project/Site: NORTH BRUSHY PW LINE

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

Lab Sample ID: MB 880-46016/5-A Matrix: Solid Analysis Batch: 46059							Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	otal/NA
	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130				02/10/23 14:55	02/11/23 16:15	1
1,4-Difluorobenzene (Surr)	105		70 - 130				02/10/23 14:55	02/11/23 16:15	1
Lab Sample ID: LCS 880-46016/1-A Matrix: Solid						C	lient Sample I	D: Lab Control Prep Type: 1	

Analysis Batch: 46059							Prep	Batch: 46016
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07008		mg/Kg		70	70 - 130	
Toluene	0.100	0.06866	*_	mg/Kg		69	70 - 130	
Ethylbenzene	0.100	0.06746	*_	mg/Kg		67	70 - 130	
m-Xylene & p-Xylene	0.200	0.1444		mg/Kg		72	70 - 130	
o-Xylene	0.100	0.07197		mg/Kg		72	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

### Lab Sample ID: LCSD 880-46016/2-A

# Matrix: Solid

Analysis Batch: 46059							Prep	Batch:	46016
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07747		mg/Kg		77	70 - 130	10	35
Toluene	0.100	0.07237		mg/Kg		72	70 - 130	5	35
Ethylbenzene	0.100	0.07187		mg/Kg		72	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1528		mg/Kg		76	70 - 130	6	35
o-Xylene	0.100	0.07577		mg/Kg		76	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)			70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

# Lab Sample ID: 890-4047-A-1-C MS

### Matrix: Solid .....

Analysis Batch: 46059									Prep	o Batch: 46016
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.0990	0.1079		mg/Kg		109	70 - 130	
Toluene	<0.00201	U *-	0.0990	0.1062		mg/Kg		107	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

13

SDG: 03A1987062

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

MS MS

Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

Result

0.1065

0.2259

0.1081

Spike

Added

0.0990

0.198

0.0990

Limits 70 - 130

70 - 130

70 - 130

Client: Ensolum Project/Site: NORTH BRUSHY PW LINE

Lab Sample ID: 890-4047-A-1-C MS

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 46059

Sample Sample

<0.00201

< 0.00402

%Recovery

<0.00201 U

**Result Qualifier** 

U

MS MS

113

112

112

Qualifier

U \*-

Job ID: 890-4053-1 SDG: 03A1987062

Prep Type: Total/NA

Prep Batch: 46016

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

108

114

109

D

### **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

### Matrix: Solid Analysis Batch: 46059

1,4-Difluorobenzene (Surr)

Lab Sample ID: 890-4047-A-1-D MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Α	nalysis Batch: 46059									Prep	Batch:	46016	
		Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Ar	nalyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Be	enzene	<0.00201	U	0.0998	0.1140		mg/Kg		114	70 - 130	6	35	
То	luene	<0.00201	U *-	0.0998	0.1074		mg/Kg		108	70 - 130	1	35	ī
Et	hylbenzene	<0.00201	U *-	0.0998	0.1067		mg/Kg		107	70 - 130	0	35	
m-	-Xylene & p-Xylene	<0.00402	U	0.200	0.2247		mg/Kg		113	70 - 130	1	35	Ē
o-2	Xylene	<0.00201	U	0.0998	0.1069		mg/Kg		107	70 - 130	1	35	
		MSD	MSD										
Sı	urrogate	%Recovery	Qualifier	Limits									
4-	Bromofluorobenzene (Surr)	109		70 - 130									

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

### Lab Sample ID: MB 880-45928/1-A **Client Sample ID: Method Blank** Matrix: Solid Prep Type: Total/NA Analysis Batch: 46064 Prep Batch: 45928 MB MB Result Qualifier RL MDL Unit D Prepared Dil Fac Analyte Analvzed <50.0 U 50.0 02/09/23 17:25 02/12/23 09:21 Gasoline Range Organics mg/Kg 1 (GRO)-C6-C10 02/09/23 17:25 02/12/23 09:21 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg 1 C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 02/09/23 17:25 02/12/23 09:21 mg/Kg 1 MB MB %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analyzed 1-Chlorooctane 87 70 - 130 02/09/23 17:25 02/12/23 09:21 1 105 70 - 130 02/09/23 17:25 02/12/23 09:21 o-Terphenyl 1

### Lab Sample ID: LCS 880-45928/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid Prep Type: Total/NA Analysis Batch: 46064 LCS LCS Spike %Rec

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	 1000	628.6	*_	mg/Kg		63	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	649.0	*-	mg/Kg		65	70 - 130	
C10-C28)								

**Eurofins Carlsbad** 

Prep Batch: 45928

Client: Ensolum Project/Site: NORTH BRUSHY PW LINE

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

Job ID: 890-4053-1 SDG: 03A1987062	
mple ID: Lab Control Sample	
Prep Type: Total/NA	

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Lab Sample ID: LCS 880-459 Matrix: Solid Analysis Batch: 46064	928/2- <b>A</b>						Client	t Sample		ontrol Sa Type: To Batch:	tal/NA
_											
		LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	81		70 - 130								
o-Terphenyl	83		70 - 130								
Lab Sample ID: LCSD 880-4	5928/3-A					Clier	nt Sam	nple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid										Type: To	
Analysis Batch: 46064										Batch:	
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	886.7		mg/Kg		89	70 - 130	34	20
(GRO)-C6-C10						5 5					
Diesel Range Organics (Over C10-C28)			1000	848.7	*1	mg/Kg		85	70 - 130	27	20
	LCSD	LCSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	100		70 - 130								
	100		101100								
Lab Sample ID: 890-4049-A-	1-C MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 46064										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 *- *1	998	<49.9	U F1	mg/Kg		0	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1 *- *1	998	<49.9	U F1	mg/Kg		0.2	70 - 130		
,	MS	MS									
Surrogate	%Recovery		Limits								
1-Chlorooctane	2	S1-	70 - 130								
o-Terphenyl		S1-	70 - 130								
Lab Sample ID: 890-4049-A-	1-D MSD					CI	ient Sa	ample IC	): Matrix S	oike Dup	olicate
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 46064										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics		U F1 *- *1	997	<49.9		mg/Kg		1	70 - 130	NC	20
(GRO)-C6-C10						0.0					
Diesel Range Organics (Over	<50.0	U F1 *- *1	997	<49.9	U F1	mg/Kg		0.3	70 - 130	3	20
C10-C28)											
	MSD	MSD									

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	2	S1-	70 - 130
o-Terphenyl	0.6	S1-	70 - 130

# **QC Sample Results**

Job ID: 890-4053-1 SDG: 03A1987062

Client: Ensolum Project/Site: NORTH BRUSHY PW LINE

# Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45902/1-A											C	lient S	ample ID:	Method	Blank
Matrix: Solid													Prep	Type: S	oluble
Analysis Batch: 45920															
		MB N	ИВ												
Analyte			Qualifier		RL		MDL	Unit		D	Pre	epared	Analy		Dil Fac
Chloride	<	<5.00 L	J		5.00			mg/Kg	1				02/09/23	17:42	1
Lab Sample ID: LCS 880-45902/2-A										Clie	nt S	Sample	ID: Lab C	ontrol S	ample
Matrix: Solid													Prep	Type: S	oluble
Analysis Batch: 45920															
				Spike		LCS	LCS						%Rec		
Analyte				Added		Result	Qual	ifier	Unit	[	D	%Rec	Limits		
Chloride				250		232.7			mg/Kg			93	90 - 110		
Lab Sample ID: LCSD 880-45902/3-	4								Cli	ent Sa	amp	ole ID: I	_ab Contr	ol Samp	le Dup
Matrix: Solid														Type: S	
Analysis Batch: 45920															
				Spike		LCSD	LCSI	C					%Rec		RPD
Analyte				Added		Result	Qual	ifier	Unit	[	D	%Rec	Limits	RPD	Limit
Chloride				250		232.8			mg/Kg			93	90 - 110	0	20
Lab Sample ID: 890-4051-A-1-B MS												Client	Sample I	D: Matrix	Spike
Matrix: Solid														Type: S	-
Analysis Batch: 45920															
	Sample	Sampl	le	Spike		MS	MS						%Rec		
Analyte	Result	Qualifi	ier	Added		Result	Qual	ifier	Unit	[	D	%Rec	Limits		
Chloride	6.83	F1		249		220.1	F1		mg/Kg			86	90 _ 110		
Lab Sample ID: 890-4051-A-1-C MS	D									Client	Sar	nple IC	: Matrix S	pike Du	olicate
Matrix: Solid														Type: S	
Analysis Batch: 45920															
-	Sample	Sampl	le	Spike		MSD	MSD						%Rec		RPD
Analyte	Result	Qualifi	ier	Added		Result	Qual	ifier	Unit	[	D	%Rec	Limits	RPD	Limit

Client: Ensolum Project/Site: NORTH BRUSHY PW LINE

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Job ID: 890-4053-1 SDG: 03A1987062

## **GC VOA**

### Prep Batch: 46016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4053-1	PH01	Total/NA	Solid	5035	
890-4053-2	PH01	Total/NA	Solid	5035	
890-4053-3	PH02	Total/NA	Solid	5035	
890-4053-4	PH02	Total/NA	Solid	5035	
890-4053-5	PH03	Total/NA	Solid	5035	
MB 880-46016/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46016/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46016/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4047-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-4047-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 46059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4053-1	PH01	Total/NA	Solid	8021B	46016
890-4053-2	PH01	Total/NA	Solid	8021B	46016
890-4053-3	PH02	Total/NA	Solid	8021B	46016
890-4053-4	PH02	Total/NA	Solid	8021B	46016
890-4053-5	PH03	Total/NA	Solid	8021B	46016
MB 880-46016/5-A	Method Blank	Total/NA	Solid	8021B	46016
LCS 880-46016/1-A	Lab Control Sample	Total/NA	Solid	8021B	46016
LCSD 880-46016/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46016
890-4047-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	46016
890-4047-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46016

### Analysis Batch: 46245

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4053-1	PH01	Total/NA	Solid	Total BTEX	
890-4053-2	PH01	Total/NA	Solid	Total BTEX	
890-4053-3	PH02	Total/NA	Solid	Total BTEX	
890-4053-4	PH02	Total/NA	Solid	Total BTEX	
890-4053-5	PH03	Total/NA	Solid	Total BTEX	

## GC Semi VOA

### Prep Batch: 45928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4053-1	PH01	Total/NA	Solid	8015NM Prep	
890-4053-2	PH01	Total/NA	Solid	8015NM Prep	
890-4053-3	PH02	Total/NA	Solid	8015NM Prep	
890-4053-4	PH02	Total/NA	Solid	8015NM Prep	
890-4053-5	PH03	Total/NA	Solid	8015NM Prep	
MB 880-45928/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45928/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45928/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4049-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4049-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4053-1	PH01	Total/NA	Solid	8015B NM	45928
890-4053-2	PH01	Total/NA	Solid	8015B NM	45928

Eurofins Carlsbad

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# GC Semi VOA (Continued)

## Analysis Batch: 46064 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4053-3	PH02	Total/NA	Solid	8015B NM	45928
890-4053-4	PH02	Total/NA	Solid	8015B NM	45928
890-4053-5	PH03	Total/NA	Solid	8015B NM	45928
MB 880-45928/1-A	Method Blank	Total/NA	Solid	8015B NM	45928
LCS 880-45928/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45928
LCSD 880-45928/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45928
890-4049-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	45928
890-4049-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45928

### Analysis Batch: 46212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4053-1	PH01	Total/NA	Solid	8015 NM	
890-4053-2	PH01	Total/NA	Solid	8015 NM	
890-4053-3	PH02	Total/NA	Solid	8015 NM	
890-4053-4	PH02	Total/NA	Solid	8015 NM	
890-4053-5	PH03	Total/NA	Solid	8015 NM	

## HPLC/IC

### Leach Batch: 45902

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4053-1	PH01	Soluble	Solid	DI Leach	
890-4053-2	PH01	Soluble	Solid	DI Leach	
890-4053-3	PH02	Soluble	Solid	DI Leach	
890-4053-4	PH02	Soluble	Solid	DI Leach	
890-4053-5	PH03	Soluble	Solid	DI Leach	
MB 880-45902/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45902/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45902/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4051-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4051-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 45920

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4053-1	PH01	Soluble	Solid	300.0	45902
890-4053-2	PH01	Soluble	Solid	300.0	45902
890-4053-3	PH02	Soluble	Solid	300.0	45902
890-4053-4	PH02	Soluble	Solid	300.0	45902
890-4053-5	PH03	Soluble	Solid	300.0	45902
MB 880-45902/1-A	Method Blank	Soluble	Solid	300.0	45902
LCS 880-45902/2-A	Lab Control Sample	Soluble	Solid	300.0	45902
LCSD 880-45902/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45902
890-4051-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	45902
890-4051-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45902

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Job ID: 890-4053-1 SDG: 03A1987062

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Job ID: 890-4053-1 SDG: 03A1987062

# Lab Sample ID: 890-4053-1 Matrix: Solid

Lab Sample ID: 890-4053-2

Lab Sample ID: 890-4053-3

Matrix: Solid

Matrix: Solid

Date Collected: 02/07/23 09:00 Date Received: 02/07/23 16:03

**Client Sample ID: PH01** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/11/23 22:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46245	02/13/23 19:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			46212	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 17:42	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		10			45920	02/09/23 20:22	СН	EET MID

# **Client Sample ID: PH01**

# Date Collected: 02/07/23 09:30

Date Received: 02/07/23 16:03

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/11/23 22:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46245	02/13/23 19:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			46212	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 18:04	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		10			45920	02/09/23 20:28	СН	EET MID

# **Client Sample ID: PH02**

# Date Collected: 02/07/23 10:00

### Date Received: 02/07/23 16:03

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/11/23 23:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46245	02/13/23 19:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			46212	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 18:26	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		10			45920	02/09/23 20:34	СН	EET MID

### **Client Sample ID: PH02** Date Collected: 02/07/23 10:30 Date Received: 02/07/23 16:03

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/11/23 23:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46245	02/13/23 19:39	SM	EET MID

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Matrix: Solid

# Lab Sample ID: 890-4053-4

Job ID: 890-4053-1 SDG: 03A1987062

# Lab Sample ID: 890-4053-4

Lab Sample ID: 890-4053-5

### **Client Sample ID: PH02** Date Collected: 02/07/23 10:30 Date Received: 02/07/23 16:03

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			46212	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 18:47	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		10			45920	02/09/23 20:40	СН	EET MID

### **Client Sample ID: PH03** Date Collected: 02/07/23 11:00

### Date Received: 02/07/23 16:03

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/12/23 00:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46245	02/13/23 19:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			46212	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 19:09	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		10			45920	02/09/23 20:47	СН	EET MID

### Laboratory References:

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

Matrix: Solid

# Matrix: Solid

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		Accreditation/C	ertification Summary		
Client: Ensolum Project/Site: NORTH B	RUSHY PW LINE			Job ID: 890-4053-1 SDG: 03A1987062	2
Laboratory: Eurofi	ins Midland				
Unless otherwise noted, all a	nalytes for this laboratory	were covered under each acc	reditation/certification below.		
Authority		Program	Identification Number	Expiration Date	
Texas		NELAP	T104704400-22-25	06-30-23	E
The following analytes	are included in this report	, but the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for which	5
the agency does not of					
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					13

# **Method Summary**

### Client: Ensolum Project/Site: NORTH BRUSHY PW LINE

Job ID: 890-4053-1 SDG: 03A1987062

lethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
fotal 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	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
3015NM Prep	Microextraction	SW846	EET MID
OI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
Protocol Refe	erences:		
ASTM = A	STM International		
EPA = US	Environmental Protection Agency		
SW846 =	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Ed	ition, November 1986 And Its Updates.	
TAL SOP	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R	eferences:		
EET MID :	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

### Laboratory References:

Client: Ensolum Project/Site: NORTH BRUSHY PW LINE Job ID: 890-4053-1 SDG: 03A1987062

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth							
90-4053-1	PH01	Solid	02/07/23 09:00	02/07/23 16:03	4							
90-4053-2	PH01	Solid	02/07/23 09:30	02/07/23 16:03	12							
90-4053-3	PH02	Solid	02/07/23 10:00	02/07/23 16:03	5							
90-4053-4	PH02	Solid	02/07/23 10:30	02/07/23 16:03	10							
890-4053-5	PH03	Solid	02/07/23 11:00	02/07/23 16:03	12							
	Xe	Xenco	Xenco		7 0	EL Paso, Hobbs, N	TX (915) M (575) 3	585-344 392-755(	13, Lubbock ), Cartsbad	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com	so.com Page of
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Project Manager:	Gilbert Moreno				Bill to: (if different)	ferent)	Jim	Jim Raley			Work	Corr
	Ensolum				Company Name:	lame:	WPX	×			Program: UST/PST D PRP	Program: UST/PST  PRP Brownfields RRC Superfund
	3122 National Parks HWY	arks HW	Y		Address:		531	5 Buena	5315 Buena Vista Dr.		State of Project:	I
e ZIP:	Carlsbad, NM 88220	3220			City, State ZIP:	ZIP:	Cart	sbad, N	Cartsbad, NM 88220		Reporting: Level II Level III	Reporting: Level II DLevel III PST/UST TRRP L Level IVL
	832-541-7719			Email:	Email: gmoreno@Ensolum.com,	Ensolu	Im.com		jim.raley@dvn.com	.com	Deliverables: EDD	ADaPT D Other:
Name:	North Brushy PW Line	V Line		Turn	Turn Around					ANALYSIS REQUEST	QUEST	Preservative Codes
ar:	03A1987062			Routine	🗌 Rush	Pres. Code	g .					None: NO DI Water: H <sub>2</sub> O
Project Location:	Eddy, NM			Due Date:	5 Day TAT							2
	Gilbert Moreno			TAT starts the day received by	day received	d by				-		
CC#:	9001900347			the lab, if rec	the lab, if received by 4:30pm	1			_			H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	PT Jemp Blank:	$( \neg$	Yes No	Wet Ice:	(Yes No	nete						H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:		1	Thermometer ID:	er ID: / T	mi as							NaHSO4: NABIS
Cooler Custody Seals:	Yes		Correction Factor:	actor:	10.0					INTINI INTINI INTINI		
Total Containers:		CO	orrected To	Corrected Temperature:			DES	15)	021	-		NaOH+Ascorbic Acid: SAPC
Sample Identification		Matrix s	Date Sampled	Time Sampled	Depth G	Grab/ # of Comp Cont	호 역 CHLOR	TPH (80	BTEX (8			Sample Comments
PH01	-	s 2	2.7.23	9:00	4' G	Grab/ 1		×	×			
PH01	-	S 2	2.7.23	9:30	12' G	Grab/ 1	-	×	×			
PH02	2	S 2	2.7.23	10:00	5' G	Grab/ 1	×	×	×			Incident ID
PH02	2	S 2	2.7.23		10' G	Grab/ 1	×	×	×			nAPP2231126594
PH03	3	S 2	2.7.23	11:00	12' G	Grab/ 1	×	×	×			
	Mount	Z					$\parallel$					
	t											
Total 200.7 / 6010	10 200.8 / 6020:	20:		BRCRA 13F	13PPM Texas 11	S 11 AI		As Ba	Be B Cd		No Ni K Se A	SiO <sub>2</sub> Na Sr TI Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed Notice: Signature of this document and relinquishment of sa of service. Eurofins Xenco will be liable only for the cost of	nd Metal(s) to be document and relinqui	analyzed shment of s	d samples con f samples ar	TCLP / S stitutes a valid   nd shall not ass	TCLP / SPLP 6010: BKCKA utes a valid purchase order from client shall not assume any responsibility for	r from cile	A SD ent compt or any los	SD AS Ba Be company to Eurofins ny losses or expensi	te Ca rofins Xenco (penses inci	CG CF CO CU PD MIT MIO MI SE AG Xenco, its affiliates and subcontractors. It assigns sto es incurred by the client if such losses are due to circu	andard terms and anstances beyond	ng. tost / 240. t / 7470 / 74771 conditions the control
Relinguished by: (Signature)	(Signature)		Receive	Received by: (Signature)	ture)		Dat	Date/Time	36	Relinquished by: (Signature)	(Signature) Received by: (Signature)	Signature) Date/Time
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#### Received by OCD: 4/15/2024 2:04:17 PM

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12 13 14

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 4053 List Number: 1 Creator: Clifton, Cloe

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	

Job Number: 890-4053-1 SDG Number: 03A1987062

Job Number: 890-4053-1 SDG Number: 03A1987062

List Source: Eurofins Midland

List Creation: 02/09/23 12:36 PM

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 4053 List Number: 2 Creator: Rodriguez, Leticia

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	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Devon Team Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 2/24/2023 2:12:57 PM

# JOB DESCRIPTION

North Brushy PW Line SDG NUMBER 03A1987062

# **JOB NUMBER**

890-4145-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

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# **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

RAMER

Generated 2/24/2023 2:12:57 PM

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

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circa by UC	D: 4/15/2024 2:04:17 PM	<b>Page 187 of</b> 5	
	Definitions/Glossary		
Client: Ensolu	m	Job ID: 890-4145-1	
Project/Site: N	North Brushy PW Line	SDG: 03A1987062	
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
*+	LCS and/or LCSD is outside acceptance limits, high biased.		
S1-	Surrogate recovery exceeds control limits, low biased.		5
S1+	Surrogate recovery exceeds control limits, high biased.		
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.		2
HPLC/IC			4
Qualifier	Qualifier Description		6
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.		
a a	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)		
וח	Penerting Limit or Peguanted Limit (Padiochemistry)		

Reporting Limit or Requested Limit (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Relative Percent Difference, a measure of the relative difference between two points

RL

RPD

TEF

TEQ

TNTC

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4

Job ID: 890-4145-1 SDG: 03A1987062

#### Job ID: 890-4145-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-4145-1

#### Receipt

The samples were received on 2/17/2023 4:06 PM. 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 0.2°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: BH12 (890-4145-1), BH12 (890-4145-2), BH12 (890-4145-3) and BH12 (890-4145-4).

#### GC VOA

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-46948 and analytical batch 880-46925 recovered outside control limits for the following analytes: Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH12 (890-4145-1), BH12 (890-4145-2), BH12 (890-4145-3), BH12 (890-4145-4), (CCV 880-46925/20), (CCV 880-46925/33), (CCV 880-46925/51), (LCS 880-46948/1-A), (LCSD 880-46948/2-A), (880-25049-A-1-I), (880-25049-A-1-J MS) and (880-25049-A-1-K MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

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.

RL

MDL Unit

D

Prepared

Job ID: 890-4145-1 SDG: 03A1987062

#### Client Sample ID: BH12

Project/Site: North Brushy PW Line

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

Result Qualifier

Date Collected: 02/16/23 10:40 Date Received: 02/17/23 16:06

Sample Depth: 12'

Client: Ensolum

Analyte

# Lab Sample ID: 890-4145

Analyzed

Matrix: Solid

145-1 Solid	3
	4
	5
Dil Fac	6
1 1 1	7
1 1	8
Dil Fac	9
1 1	10
Dil Fac	11
1	12
Dil Fac	13
1	14

· ····· <b>,</b> ···				=		-		· · · · · · · · · · · · · · · · · · ·	
Benzene	<0.00200	U *+	0.00200		mg/Kg		02/22/23 14:24	02/23/23 03:48	1
Toluene	<0.00200	U *+	0.00200		mg/Kg		02/22/23 14:24	02/23/23 03:48	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		02/22/23 14:24	02/23/23 03:48	1
m-Xylene & p-Xylene	<0.00400	U *+	0.00400		mg/Kg		02/22/23 14:24	02/23/23 03:48	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		02/22/23 14:24	02/23/23 03:48	1
Xylenes, Total	<0.00400	U *+	0.00400		mg/Kg		02/22/23 14:24	02/23/23 03:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	199	S1+	70 - 130				02/22/23 14:24	02/23/23 03:48	1
1,4-Difluorobenzene (Surr)	82		70 - 130				02/22/23 14:24	02/23/23 03:48	1
- Method: TAL SOP Total BTEX - 1	Total BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			02/23/23 12:26	1
– Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	129		49.9		mg/Kg			02/24/23 13:40	1
_ Method: SW846 8015B NM - Dies	sel Range Orga	anics (DRO)	(GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9		49.9		mg/Kg		02/23/23 17:02	02/24/23 01:17	1
(GRO)-C6-C10					3 3				
Diesel Range Organics (Over	129		49.9		mg/Kg		02/23/23 17:02	02/24/23 01:17	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/23/23 17:02	02/24/23 01:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				02/23/23 17:02	02/24/23 01:17	1
o-Terphenyl 	90		70 - 130				02/23/23 17:02	02/24/23 01:17	1
Method: EPA 300.0 - Anions, Ion	Chromatogra	ohy - Solub	le						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3060		24.9		mg/Kg			02/23/23 00:30	5
Client Sample ID: BH12							Lab Sar	nple ID: 890-	4145-2
Date Collected: 02/16/23 10:50								Matri	ix: Solid
Date Received: 02/17/23 16:06									
Sample Depth: 15'									
_ Method: SW846 8021B - Volatile	Organic Comp	ounds (GC	)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201		mg/Kg		02/22/23 14:24	02/23/23 04:14	1
Toluene	<0.00201	U *+	0.00201		ma/Ka		02/22/23 14:24	02/23/23 04:14	1

4-Bromofluorobenzene (Surr)	224	S1+	70 - 130		02/22/23 14:24	02/23/23 04:14	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg	02/22/23 14:24	02/23/23 04:14	1
o-Xylene	<0.00201	U *+	0.00201	mg/Kg	02/22/23 14:24	02/23/23 04:14	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg	02/22/23 14:24	02/23/23 04:14	1
Ethylbenzene	<0.00201	U *+	0.00201	mg/Kg	02/22/23 14:24	02/23/23 04:14	1
Toluene	<0.00201	U *+	0.00201	mg/Kg	02/22/23 14:24	02/23/23 04:14	1
Delizerie	S0.00201	0	0.00201	ilig/itg	02/22/23 14.24	02/23/23 04.14	

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#### **Client Sample Results**

Job ID: 890-4145-1 SDG: 03A1987062

Lab Sample ID: 890-4145-2

02/23/23 17:02

02/24/23 01:39

Lab Sample ID: 890-4145-3

1

Matrix: Solid

#### **Client Sample ID: BH12**

Project/Site: North Brushy PW Line

Date Collected: 02/16/23 10:50 Date Received: 02/17/23 16:06

Sample Depth: 15'

Client: Ensolum

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

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	74		70 - 130				02/22/23 14:24	02/23/23 04:14	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	ulation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/23/23 12:26	1
- Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			02/24/23 13:40	1
- Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.8	U	49.8		mg/Kg		02/23/23 17:02	02/24/23 01:39	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.8	U	49.8		mg/Kg		02/23/23 17:02	02/24/23 01:39	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/23/23 17:02	02/24/23 01:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130				02/23/23 17:02	02/24/23 01:39	1

#### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

88

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7490	50.3	mg/Kg			02/23/23 00:49	10

70 - 130

#### **Client Sample ID: BH12**

o-Terphenyl

Date Collected: 02/16/23 11:00 Date Received: 02/17/23 16:06 Sample Depth: 20'

#### Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Benzene <0.00202 U\*+ 0.00202 mg/Kg 02/22/23 14:24 02/23/23 04:40 1 Toluene <0.00202 U\*+ 0.00202 02/22/23 14:24 02/23/23 04:40 mg/Kg 1 Ethylbenzene <0.00202 U\*+ 0.00202 mg/Kg 02/22/23 14:24 02/23/23 04:40 1 <0.00404 U\*+ 0.00404 m-Xylene & p-Xylene 02/22/23 14:24 02/23/23 04:40 mg/Kg 1 o-Xylene <0.00202 U\*+ 0.00202 mg/Kg 02/22/23 14:24 02/23/23 04:40 1 Xylenes, Total <0.00404 U\*+ 0.00404 mg/Kg 02/22/23 14:24 02/23/23 04:40 1 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 198 S1+ 70 - 130 4-Bromofluorobenzene (Surr) 02/22/23 14:24 02/23/23 04:40 1 1,4-Difluorobenzene (Surr) 81 70 - 130 02/22/23 14:24 02/23/23 04:40 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL MDL Unit D Dil Fac Prepared Analyzed Total BTEX <0.00404 U 0.00404 02/23/23 12:26 mg/Kg 1 Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

	unge ergan		, .						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/24/23 13:40	1

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Matrix: Solid

5

Job ID: 890-4145-1 SDG: 03A1987062

Matrix: Solid

5

Lab Sample ID: 890-4145-3

Lab Sample ID: 890-4145-4

Matrix: Solid

## Client Sample ID: BH12

Project/Site: North Brushy PW Line

Date Collected: 02/16/23 11:00 Date Received: 02/17/23 16:06

Sample Depth: 20'

Client: Ensolum

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/23/23 17:02	02/24/23 02:23	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/23/23 17:02	02/24/23 02:23	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/23/23 17:02	02/24/23 02:23	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	99		70 - 130				02/23/23 17:02	02/24/23 02:23	
o-Terphenyl	101		70 - 130				02/23/23 17:02	02/24/23 02:23	

#### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4560	50.0	mg/Kg			02/23/23 00:55	10

#### Client Sample ID: BH12

#### Date Collected: 02/16/23 11:10

#### Date Received: 02/17/23 16:06

Sample Depth: 26'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		02/22/23 14:24	02/23/23 05:07	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		02/22/23 14:24	02/23/23 05:07	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		02/22/23 14:24	02/23/23 05:07	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		02/22/23 14:24	02/23/23 05:07	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		02/22/23 14:24	02/23/23 05:07	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		02/22/23 14:24	02/23/23 05:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	192	S1+	70 - 130				02/22/23 14:24	02/23/23 05:07	1
1,4-Difluorobenzene (Surr)	66	S1-	70 - 130				02/22/23 14:24	02/23/23 05:07	1
Method: TAL SOP Total BTEX -	Total BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/23/23 12:26	1
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/24/23 13:40	1
- Method: SW846 8015B NM - Die	esel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		02/23/23 17:02	02/24/23 02:45	1
(GRO)-C6-C10			50.0				00/00/00 17	00/04/00 00 ·-	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/23/23 17:02	02/24/23 02:45	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/23/23 17:02	02/24/23 02:45	1

		Client S	ample R	esults	;					1
Client: Ensolum Project/Site: North Brushy PW Line								Job ID: 890 SDG: 03A		2
Client Sample ID: BH12 Date Collected: 02/16/23 11:10							Lab Sa	mple ID: 890- Matri	4145-4 ix: Solid	3
Date Received: 02/17/23 16:06 Sample Depth: 26'										4
Method: EPA 300.0 - Anions, Ion Ch Analyte		hy - Soluble Qualifier	RL	МП	Unit	D	Prepared	Analyzed	Dil Fac	5
Chloride	348		4.98		mg/Kg		Troparca	02/23/23 01:01	1	6
										7
										8
										9
										10
										11
										12
										13
										14

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#### Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

				Percent Surrog
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-25049-A-1-J MS	Matrix Spike	180 S1+	81	
880-25049-A-1-K MSD	Matrix Spike Duplicate	187 S1+	80	
890-4145-1	BH12	199 S1+	82	
890-4145-2	BH12	224 S1+	74	
890-4145-3	BH12	198 S1+	81	
890-4145-4	BH12	192 S1+	66 S1-	
LCS 880-46948/1-A	Lab Control Sample	199 S1+	83	
LCSD 880-46948/2-A	Lab Control Sample Dup	197 S1+	82	
MB 880-46866/5-A	Method Blank	113	75	
MB 880-46948/5-A	Method Blank	125	71	

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Mau	IX.	<b>30110</b>	

				Percent Surrogate Recovery (Acceptance Limits
		1CO1	OTPH1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
37-A-1-D MS	Matrix Spike	108	102	
37-A-1-E MSD	Matrix Spike Duplicate	102	97	
145-1	BH12	86	90	
45-2	BH12	84	88	
-3	BH12	99	101	
-4	BH12	104	101	
-47116/2-A	Lab Control Sample	111	109	
880-47116/3-A	Lab Control Sample Dup	102	103	
380-47116/1-A	Method Blank	135 S1+	138 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

#### Job ID: 890-4145-1 SDG: 03A1987062

Prep Type: Total/NA

Prep Type: Total/NA

Project/Site: North Brushy PW Line

Client: Ensolum

## **QC Sample Results**

Job ID: 890-4145-1 SDG: 03A1987062

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

Lab Sample ID: MB 880-46866	/ <b>5-A</b>								Chefit 3	ample ID: Metho	
Matrix: Solid										Prep Type:	
Analysis Batch: 46925										Prep Batc	h: 46866
Analyte		3 MB t Qualifier	RL	,		Unit	D	,	Prepared	Analyzed	Dil Fac
Benzene	<0.00200		0.00200			mg/Kg	Ľ		02/21/23 14:31	02/22/23 11:37	
Toluene	<0.00200		0.00200			mg/Kg			02/21/23 14:31	02/22/23 11:37	-
Ethylbenzene	<0.00200		0.00200			mg/Kg			02/21/23 14:31	02/22/23 11:37	-
m-Xylene & p-Xylene	<0.00200		0.00200						02/21/23 14:31	02/22/23 11:37	
			0.00400			mg/Kg			02/21/23 14:31	02/22/23 11:37	
o-Xylene	< 0.00200					mg/Kg				02/22/23 11:37	
Xylenes, Total	<0.00400	) ()	0.00400			mg/Kg			02/21/23 14:31	02/22/23 11:37	
	ME	B MB									
Surrogate	%Recover	/ Qualifier	Limits						Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	11.	3	70 - 130					-	02/21/23 14:31	02/22/23 11:37	1
1,4-Difluorobenzene (Surr)	7:	5	70 - 130						02/21/23 14:31	02/22/23 11:37	1
Lab Sample ID: MB 880-46948	/ <b>5-A</b>								Client Sa	ample ID: Metho	od Blani
Matrix: Solid										Prep Type:	
Analysis Batch: 46925										Prep Batc	
Analysis Baton. 40020	ME	3 MB								Trop Date	
Analyte		t Qualifier	RL	,	NDL	Unit	0	)	Prepared	Analyzed	Dil Fac
Benzene	<0.00200		0.00200			mg/Kg			02/22/23 14:24	02/23/23 01:12	
Toluene	<0.00200		0.00200			mg/Kg			02/22/23 14:24	02/23/23 01:12	1
Ethylbenzene	<0.00200		0.00200			mg/Kg			02/22/23 14:24	02/23/23 01:12	
m-Xylene & p-Xylene	<0.00200		0.00200			mg/Kg			02/22/23 14:24	02/23/23 01:12	
o-Xylene	<0.00400		0.00200			mg/Kg			02/22/23 14:24	02/23/23 01:12	-
-											1
Xylenes, Total	<0.00400	) U	0.00400			mg/Kg			02/22/23 14:24	02/23/23 01:12	I
	ME	3 MB									
Surrogate	%Recover	/ Qualifier	Limits						Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	12:	5	70 - 130					_	02/22/23 14:24	02/23/23 01:12	
1,4-Difluorobenzene (Surr)	7	1	70 - 130						02/22/23 14:24	02/23/23 01:12	1
Lab Sample ID: LCS 880-4694	8/1-A							Cli	ient Sample	ID: Lab Contro	l Sample
Matrix: Solid										Prep Type:	
Analysis Batch: 46925										Prep Batc	
·····, ··· · · · · · · · · · · · · · ·			Spike	LCS	LCS					%Rec	
Analyte			Added	Result	Qual	ifier	Unit		D %Rec	Limits	
Benzene			0.100	0.1279			mg/Kg	_	128	70 - 130	
Toluene			0.100	0.1292			mg/Kg		129	70 - 130	
Ethylbenzene			0.100	0.1262			mg/Kg		127	70 - 130	
m-Xylene & p-Xylene			0.200	0.2592			mg/Kg		130	70 - 130	
o-Xylene			0.100	0.1242			mg/Kg		124	70 - 130	
0-Aylerie			0.100	0.1242			ing/itg		124	70 - 150	
		s									
	LCS LC										
	%Recovery Qu	alifier	Limits								
Surrogate 4-Bromofluorobenzene (Surr)	%RecoveryQu199S1		70 - 130								
4-Bromofluorobenzene (Surr)	%Recovery Qu										
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	<u>%Recovery</u> Qu 199 S1 83		70 - 130				Clier	nt S	Sample ID: L	ab Control San	
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-469	<u>%Recovery</u> Qu 199 S1 83		70 - 130				Clier	nt S	Sample ID: L	ab Control San Prep Type:	
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-469 Matrix: Solid	<u>%Recovery</u> Qu 199 S1 83		70 - 130				Clier	nt S	Sample ID: L		Total/NA
	<u>%Recovery</u> Qu 199 S1 83		70 - 130	LCSD	LCS	D	Clier	nt S	Sample ID: L	Prep Type:	Total/NA

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#### **QC Sample Results**

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-4145-1 SDG: 03A1987062

**Client Sample ID: Matrix Spike** 

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Prep Type: Total/NA

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

Lab Sample ID: LCSD 880-4 Matrix: Solid Analysis Batch: 46925	5 <b>948/2-A</b>		Clie	nt Sarr	ple ID:		l Sampl ype: To Batch:	al/NA			
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene			0.100	0.1491	*+	mg/Kg		149	70 - 130	14	35
Ethylbenzene			0.100	0.1497	*+	mg/Kg		150	70 - 130	17	35
m-Xylene & p-Xylene			0.200	0.3065	*+	mg/Kg		153	70 - 130	17	35
o-Xylene			0.100	0.1486	*+	mg/Kg		149	70 - 130	18	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	197	S1+	70 - 130								
1,4-Difluorobenzene (Surr)	82		70 _ 130								

#### Lab Sample ID: 880-25049-A-1-J MS Matrix: Solid

#### Analysis Batch: 46925

Analysis Batch: 46925										Batch: 469	948
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00198	U *+	0.101	0.1225		mg/Kg		122	70 - 130		
Toluene	<0.00198	U *+	0.101	0.1220		mg/Kg		121	70 - 130		
Ethylbenzene	<0.00198	U *+	0.101	0.1226		mg/Kg		122	70 - 130		
m-Xylene & p-Xylene	<0.00396	U *+	0.202	0.2506		mg/Kg		124	70 - 130		
o-Xylene	<0.00198	U *+	0.101	0.1188		mg/Kg		118	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	180	S1+	70 - 130
1,4-Difluorobenzene (Surr)	81		70 - 130

#### Lab Sample ID: 880-25049-A-1-K MSD Matrix: Solid Analysis Batch: 46925

Analysis Batch: 46925									Prep	Batch:	46948
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U *+	0.0992	0.1275		mg/Kg		129	70 - 130	4	35
Toluene	<0.00198	U *+	0.0992	0.1178		mg/Kg		119	70 - 130	4	35
Ethylbenzene	<0.00198	U *+	0.0992	0.1169		mg/Kg		118	70 - 130	5	35
m-Xylene & p-Xylene	<0.00396	U *+	0.198	0.2401		mg/Kg		121	70 - 130	4	35
o-Xylene	<0.00198	U *+	0.0992	0.1168		mg/Kg		118	70 - 130	2	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	187	S1+	70 - 130								

70 - 130

#### 1,4-Difluorobenzene (Surr)

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

80

Lab Sample ID: MB 880-47116/1-A Matrix: Solid Analysis Batch: 46992	МВ					Client Sa	mple ID: Metho Prep Type: ٦ Prep Batch	Fotal/NA	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		02/23/23 17:02	02/23/23 20:30	1
(GRO)-C6-C10									

5 6 7

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## **QC Sample Results**

Job ID: 890-4145-1 SDG: 03A1987062

ab Sample ID: MB 880-47116/1	<b>-A</b>									Client Sa	ample ID: I		
Matrix: Solid												ype: To	
Analysis Batch: 46992											Prep	Batch:	47116
	_		MB	_				_	_				
Analyte			Qualifier			MDL L		<u>D</u>		repared	Analyz		Dil Fac
Diesel Range Organics (Over C10-C28)	<	<50.0	U	50	0.0	n	ng/Kg		02/2	3/23 17:02	02/23/23 2	20:30	1
Oll Range Organics (Over C28-C36)	<	<50.0		50	0.0	n	ng/Kg		02/2	3/23 17:02	02/23/23 2	20:30	1
			MB						_			_	
Surrogate	%Reco	-	Qualifier	Limits						repared	Analyz		Dil Fac
1-Chlorooctane			S1+	70 - 130						3/23 17:02	02/23/23		1
p-Terphenyl		138	S1+	70 - 130	)				02/2	3/23 17:02	02/23/23	20:30	1
ab Sample ID: I CS 990 47116/	2 ^							~	liont	Sampla		ontrol S	ampla
Lab Sample ID: LCS 880-47116// Matrix: Solid	2-M							U U	ment	Sample	ID: Lab Co		-
												ype: To	
Analysis Batch: 46992				o								Batch:	4/116
				Spike		LCS			-	~ <del>-</del>	%Rec		
Analyte				Added		Qualifi			_ <u>D</u>	%Rec	Limits		
Gasoline Range Organics				1000	935.8		mg/Kg			94	70 - 130		
GRO)-C6-C10				1000	1004					102	70 490		
Diesel Range Organics (Over C10-C28)				1000	1034		mg/Kg			103	70 - 130		
		LCS											
Surrogate	%Recovery	Qua	lifier	Limits									
1-Chlorooctane	111			70 - 130									
p-Terphenyl	109			70 - 130									
Lab Sample ID: LCSD 880-47116	6/3 <b>-A</b>						C	ient	Sam	iple ID: L	ab Contro		-
Matrix: Solid												ype: To	
Analysis Batch: 46992												Batch:	
				Spike		LCSD					%Rec		RPD
Analyte				Added	Result	Qualifi			D	%Rec	Limits	RPD	Limit
Gasoline Range Organics				1000	849.0		mg/Kg			85	70 - 130	10	20
(GRO)-C6-C10				4000							70 10-		
Diesel Range Organics (Over				1000	922.0		mg/Kg			92	70 - 130	11	20
C10-C28)													
	LCSD	LCS	D										
Surrogate	%Recovery	Qua	lifier	Limits									
1-Chlorooctane	102			70_130									
p-Terphenyl	103			70_130									
-													
Lab Sample ID: 890-4137-A-1-D	MS									Client S	Sample ID:	: Matrix	Spike
Matrix: Solid												ype: To	
Analysis Batch: 46992												Batch:	
• • • • • • •	Sample	Sam	ple	Spike	MS	MS					%Rec		
Analyte	Result		-	Added		Qualifi	er Unit		D	%Rec	Limits		
	<49.8			1000	1169		mg/Kg			114	70 - 130		
Jasoline Rande Urdanics	10.0	-											
(GRO)-C6-C10	<49.8	U		1000	934.3		mg/Ka			93	70 - 130		
GRO)-C6-C10 Diesel Range Organics (Over	<49.8	U		1000	934.3		mg/Kg			93	70 - 130		
(GRO)-C6-C10 Diesel Range Organics (Over				1000	934.3		mg/Kg			93	70 - 130		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) <b>Surrogate</b>		MS		1000 Limits	934.3		mg/Kg			93	70 - 130		

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108

102

1-Chlorooctane

o-Terphenyl

70 - 130

70 - 130

Project/Site: North Brushy PW Line

Client: Ensolum

#### Job ID: 890-4145-1 SDG: 03A1987062

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

Matrix: Solid	-E MSD					С	lient Sa	ample IC	): Matrix Sp		
										Гуре: То	
Analysis Batch: 46992										Batch:	
	•	Sample	Spike	MSD	MSD				%Rec		RPI
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1000	1116		mg/Kg		108	70 - 130	5	2
Diesel Range Organics (Over C10-C28)	<49.8	U	1000	897.5		mg/Kg		90	70 - 130	4	2
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	102		70 - 130								
o-Terphenyl	97		70 - 130								
lethod: 300.0 - Anions, lo Lab Sample ID: MB 880-4684 Matrix: Solid		ography						Client S	ample ID: I Prep	Method Type: S	
Analysis Batch: 46984		MB MB									
Analyte	R	esult Qualifier		RL	MDL Unit		D P	repared	Analyz	ed	Dil Fa
Chloride	<	5.00 U		5.00	mg/K	 g			02/22/23		
Analysis Batch: 46984			Spike	LCS	LCS				%Rec	Type: S	
Analyte			Added	Rosult	Qualifier			0/ <b>D</b>			
				Kesuk	Quaimer	Unit	D	%Rec	Limits		
Chloride			250	232.9	Quaimer	mg/Kg	<u> </u>	93	90 - 110		
Lab Sample ID: LCSD 880-46 Matrix: Solid	848/3-A		250		Quaimer	mg/Kg		93	90 - 110 Lab Contro	ol Sampl Type: S	
Lab Sample ID: LCSD 880-46 Matrix: Solid	848/3-A		250 Spike	232.9	LCSD	mg/Kg		93	90 - 110 Lab Contro		olub
<sup>Chloride</sup> Lab Sample ID: LCSD 880-46 Matrix: Solid Analysis Batch: 46984 Analyte	848/3-A			232.9 LCSD		mg/Kg		93	90 - 110 Lab Contro Prep		olub RP
Lab Sample ID: LCSD 880-46 Matrix: Solid Analysis Batch: 46984 <sup>Analyte</sup>	848/3-A		Spike	232.9 LCSD	LCSD	mg/Kg	ent San	93 nple ID:	90 - 110 Lab Contro Prep %Rec	Type: S	olub RF Lin
Lab Sample ID: LCSD 880-46 Matrix: Solid Analysis Batch: 46984 Analyte Chloride Lab Sample ID: 890-4135-A-1 Matrix: Solid			Spike Added	232.9 LCSD Result	LCSD	mg/Kg Clie Unit	ent San	93 <b>nple ID:</b> <b>%Rec</b> 93	90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: S	olub RP Lim 2 Spik
Lab Sample ID: LCSD 880-46 Matrix: Solid Analysis Batch: 46984 Analyte Chloride Lab Sample ID: 890-4135-A-1 Matrix: Solid	 -B MS	Sample	Spike Added	232.9 LCSD Result 232.7	LCSD	mg/Kg Clie Unit	ent San	93 <b>nple ID:</b> <b>%Rec</b> 93	90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: S <u>RPD</u> 0 : Matrix	olubl RP Lim 2 Spik
Lab Sample ID: LCSD 880-46 Matrix: Solid Analysis Batch: 46984	-B MS Sample	Sample Qualifier	Spike Added 250	232.9 LCSD Result 232.7 MS	LCSD Qualifier	mg/Kg Clie Unit	ent San	93 <b>nple ID:</b> <b>%Rec</b> 93	90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep	Type: S <u>RPD</u> 0 : Matrix	olubl RP Lim 2 Spik
Lab Sample ID: LCSD 880-46 Matrix: Solid Analysis Batch: 46984 Analyte Chloride Lab Sample ID: 890-4135-A-1 Matrix: Solid Analysis Batch: 46984	-B MS Sample	Qualifier	Spike Added 250 Spike	232.9 LCSD Result 232.7 MS	LCSD Qualifier MS	mg/Kg Clie Unit mg/Kg	ont San	93 nple ID:   %Rec 93 Client	90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec	Type: S <u>RPD</u> 0 : Matrix	olub RF Lin Spik
Lab Sample ID: LCSD 880-46 Matrix: Solid Analysis Batch: 46984 Chloride Lab Sample ID: 890-4135-A-1 Matrix: Solid Analysis Batch: 46984	-B MS Sample Result <5.02 -C MSD	Qualifier	Spike Added 250 Spike Added 251	232.9 LCSD Result 232.7 MS Result 240.6	LCSD Qualifier MS Qualifier	mg/Kg Clie Unit mg/Kg	D	93 nple ID: 1 %Rec 93 Client %Rec 95	90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 O: Matrix Sp Prep	Type: S <u>RPD</u> 0 : Matrix Type: S	olub RP Lin 2 Spik olub
Lab Sample ID: LCSD 880-46 Matrix: Solid Analysis Batch: 46984 Chloride Lab Sample ID: 890-4135-A-1 Matrix: Solid Analysis Batch: 46984 Chloride Lab Sample ID: 890-4135-A-1 Matrix: Solid	-B MS Sample Result <5.02 -C MSD Sample	Qualifier	Spike Added 250 Spike Added	232.9 LCSD Result 232.7 MS Result 240.6	LCSD Qualifier MS	mg/Kg Clie Unit mg/Kg	D	93 nple ID: 1 %Rec 93 Client %Rec 95	90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 20 - 110	Type: S <u>RPD</u> 0 : Matrix Type: S 	olubl RP Lim 2 Spik olubl

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# QC Sample Results

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-4145-1 SDG: 03A1987062

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4144-A-4	-B MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 46984											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	2060		1240	3404		mg/Kg		108	90 - 110		
Matrix: Solid	-C MSD					Cli	ient Sa	ample ID	): Matrix Sp Prep	oike Dup Type: S	
Matrix: Solid		Sample	Spike	MSD	MSD	Cli	ient Sa	ample ID			
Lab Sample ID: 890-4144-A-4 Matrix: Solid Analysis Batch: 46984 Analyte	Sample	Sample Qualifier	Spike Added		MSD Qualifier	Cli Unit	ient Sa D	ample ID %Rec	Prep		oluble

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## **QC Association Summary**

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-4145-1

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12 13

46948

SDG: 03A1987062

#### **GC VOA**

#### Prep Batch: 46866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-46866/5-A	Method Blank	Total/NA	Solid	5035	
nalysis Batch: 46925	5				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4145-1	BH12	Total/NA	Solid	8021B	46948
890-4145-2	BH12	Total/NA	Solid	8021B	46948
890-4145-3	BH12	Total/NA	Solid	8021B	46948
890-4145-4	BH12	Total/NA	Solid	8021B	46948
MB 880-46866/5-A	Method Blank	Total/NA	Solid	8021B	46866
MB 880-46948/5-A	Method Blank	Total/NA	Solid	8021B	46948
LCS 880-46948/1-A	Lab Control Sample	Total/NA	Solid	8021B	46948
LCSD 880-46948/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46948
880-25049-A-1-J MS	Matrix Spike	Total/NA	Solid	8021B	46948

#### Prep Batch: 46948

880-25049-A-1-K MSD

Matrix Spike Duplicate

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4145-1	BH12	Total/NA	Solid	5035	
890-4145-2	BH12	Total/NA	Solid	5035	
890-4145-3	BH12	Total/NA	Solid	5035	
890-4145-4	BH12	Total/NA	Solid	5035	
MB 880-46948/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46948/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46948/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-25049-A-1-J MS	Matrix Spike	Total/NA	Solid	5035	
880-25049-A-1-K MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Total/NA

Solid

8021B

#### Analysis Batch: 47063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-4145-1	BH12	Total/NA	Solid	Total BTEX
890-4145-2	BH12	Total/NA	Solid	Total BTEX
890-4145-3	BH12	Total/NA	Solid	Total BTEX
890-4145-4	BH12	Total/NA	Solid	Total BTEX

#### GC Semi VOA

#### Analysis Batch: 46992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4145-1	BH12	Total/NA	Solid	8015B NM	47116
890-4145-2	BH12	Total/NA	Solid	8015B NM	47116
890-4145-3	BH12	Total/NA	Solid	8015B NM	47116
890-4145-4	BH12	Total/NA	Solid	8015B NM	47116
MB 880-47116/1-A	Method Blank	Total/NA	Solid	8015B NM	47116
LCS 880-47116/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47116
LCSD 880-47116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47116
890-4137-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	47116
890-4137-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47116
Prep Batch: 47116					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4145-1	BH12	Total/NA	Solid	8015NM Prep	

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#### **QC** Association Summary

#### GC Semi VOA (Continued)

#### Prep Batch: 47116 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4145-2	BH12	Total/NA	Solid	8015NM Prep	
890-4145-3	BH12	Total/NA	Solid	8015NM Prep	
890-4145-4	BH12	Total/NA	Solid	8015NM Prep	
MB 880-47116/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47116/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4137-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4137-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4145-1	BH12	Total/NA	Solid	8015 NM	
890-4145-2	BH12	Total/NA	Solid	8015 NM	
890-4145-3	BH12	Total/NA	Solid	8015 NM	
890-4145-4	BH12	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 46848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4145-1	BH12	Soluble	Solid	DI Leach	
890-4145-2	BH12	Soluble	Solid	DI Leach	
890-4145-3	BH12	Soluble	Solid	DI Leach	
890-4145-4	BH12	Soluble	Solid	DI Leach	
MB 880-46848/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46848/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46848/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4135-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4135-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-4144-A-4-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4144-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 46984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4145-1	BH12	Soluble	Solid	300.0	46848
890-4145-2	BH12	Soluble	Solid	300.0	46848
890-4145-3	BH12	Soluble	Solid	300.0	46848
890-4145-4	BH12	Soluble	Solid	300.0	46848
MB 880-46848/1-A	Method Blank	Soluble	Solid	300.0	46848
LCS 880-46848/2-A	Lab Control Sample	Soluble	Solid	300.0	46848
LCSD 880-46848/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46848
890-4135-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	46848
890-4135-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46848
890-4144-A-4-B MS	Matrix Spike	Soluble	Solid	300.0	46848
890-4144-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46848

#### Job ID: 890-4145-1 SDG: 03A1987062

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Job ID: 890-4145-1 SDG: 03A1987062

#### Lab Sample ID: 890-4145-1 Matrix: Solid

Lab Sample ID: 890-4145-2

Lab Sample ID: 890-4145-3

Lab Sample ID: 890-4145-4

Matrix: Solid

Matrix: Solid

Date Collected: 02/16/23 10:40

**Client Sample ID: BH12** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	46948	02/22/23 14:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46925	02/23/23 03:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47063	02/23/23 12:26	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47182	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47116	02/23/23 17:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/24/23 01:17	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		5			46984	02/23/23 00:30	СН	EET MID

#### **Client Sample ID: BH12**

#### Date Collected: 02/16/23 10:50

Date Received: 02/17/23 16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	46948	02/22/23 14:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46925	02/23/23 04:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47063	02/23/23 12:26	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47182	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	47116	02/23/23 17:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/24/23 01:39	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		10			46984	02/23/23 00:49	СН	EET MID

#### **Client Sample ID: BH12**

#### Date Collected: 02/16/23 11:00

Date Received: 02/17/23 16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	46948	02/22/23 14:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46925	02/23/23 04:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47063	02/23/23 12:26	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47182	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47116	02/23/23 17:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/24/23 02:23	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		10			46984	02/23/23 00:55	CH	EET MID

#### **Client Sample ID: BH12** Date Collected: 02/16/23 11:10 Date Received: 02/17/23 16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	46948	02/22/23 14:24	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46925	02/23/23 05:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47063	02/23/23 12:26	AJ	EET MID

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Matrix: Solid

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# Project/Site: North Brushy PW Line

Date Received: 02/17/23 16:06

Released to	Imaging:	2/17/2025	2:02:20 PM

Job ID: 890-4145-1 SDG: 03A1987062

Matrix: Solid

Lab Sample ID: 890-4145-4

#### Client Sample ID: BH12 Date Collected: 02/16/23 11:10

Project/Site: North Brushy PW Line

Client: Ensolum

Date Received: 02/17/23 16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			47182	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	47116	02/23/23 17:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/24/23 02:45	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		1			46984	02/23/23 01:01	СН	EET MID

Laboratory References:

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

Eurofins Carlsbad

Released to Imaging: 2/17/2025 2:02:20 PM

	Accreditation/Co	ertification Summary		
Client: Ensolum Project/Site: North Brushy PW Line			Job ID: 890-4145-1 SDG: 03A1987062	2
Laboratory: Eurofins Midland				
Unless otherwise noted, all analytes for this laborator	y were covered under each acci	reditation/certification below.		
Authority	Program	Identification Number	Expiration Date	
Texas	NELAP	T104704400-22-25	06-30-23	
The following analytes are included in this repor	rt, but the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for which	5
the agency does not offer certification.		, , , , ,		
Analysis Method Prep Method	Matrix	Analyte		
8015 NM	Solid	Total TPH		
Total BTEX	Solid	Total BTEX		
				8
				9
				10
				13

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#### **Method Summary**

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-4145-1 SDG: 03A1987062

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	EPA	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
EPA = US	STM International Environmental Protection Agency Tract Matheda Fra Fundaming Onlid Marke, Physical (Chaminal Matheda), Third Fuliti		
	Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Editio	n, November 1986 And Its Updates.	
TAL SOP :	<ul> <li>TestAmerica Laboratories, Standard Operating Procedure</li> </ul>		
Laboratory Re	eferences:		
EET MID =	Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

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#### Job ID: 890-4145-1 SDG: 03A1987062

#### Client: Ensolum Project/Site: North Brushy PW Line

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
90-4145-1	BH12	Solid	02/16/23 10:40	02/17/23 16:06		
90-4145-2	BH12	Solid	02/16/23 10:50	02/17/23 16:06	15'	
90-4145-3	BH12	Solid	02/16/23 11:00	02/17/23 16:06	20'	
90-4145-4	BH12	Solid	02/16/23 11:10	02/17/23 16:06	26'	

Received by OCD: 4/15/2024 2:04:17 PM

🔅 eurofins		Wiron	Environment Testing	sting	Mic	Chain OT Custody Houston, TX (281) 240-4200. Dallas. TX (214) 902-0300 Idland. TX (432) 704-5440. San Antonio. TX (210) 509-33:	TX (281 (432) 7	1 <b>N C</b> ) 240-4; 04-5440	Chain of Custody , TX (281) 240-4200, Dallas, TX (214) 90 X (432) 704-5440, San Antonio, TX (210)	as, TX (2 Ionio, TX	<b>Gy</b> (14) 902- (210) 50	0300 19-3334				×	ork	Work Order No:	No:					
	Xe	Xenco		Sume	MIC	Midland, 1X (432) /04-5440, San Antonio, 1X (210) 505-334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	(432) m TX (915)	04-5440 585-34	43, Lubb	ock, TX	(210) Society	-1296						140.	5					
					т	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	M (575) :	392-755	0, Carlsb	ad, NM (	575) 988	-3199					www.>	www.xenco.com	noc	Page	Φ	-	of	of
Project Manager:	Gilbert Moreno				Bill to: (if different)	erent)	Jim	Jim Raley									Wo	rk Or	der Cu	Work Order Comments	Its			
Company Name:	Ensolum				Company Name:	ame:	WPX	×						Prog	Program: UST/PST	ST/PS			rown	PRP Brownfields RRC	] RRC	S	uperfund	Superfund
Address:	3122 National Parks HWY	arks HV	AA A		Address:		531	5 Buena	5315 Buena Vista Dr	Оr.				State	State of Project:	ject:							1	
City, State ZIP:	Carlsbad, NM 88220	8220			City, State ZIP:	IP:	Carl	Isbad, N	Carlsbad, NM 88220	0				Repo	rting: L	evel II		Ē	PST/	Reporting: Level III CLevel III PST/UST TRRP	] TRRI			
Phone:	832-541-7719			Email:	Email: gmoreno@Ensolum.com, jim.raley@dvn.com	Ensolu	im.com	), jim.ra	aley@d	Vn.com				Deliv	Deliverables: EDD	EDD			ADaPT		Other:	Б. 		
Project Name:	North Brushy PW Line	W Line		Turn	Turn Around		_				A	ANALYSIS		REQUEST						Pri	eserva	ative	Codes	Preservative Codes
Project Number:	03A1987062			Routine	🗌 Rush	Pres. Code	a 15													None: NO	Ō	₽	Water: H <sub>2</sub> C	DI Water: H <sub>2</sub> O
Project Location:	Eddy, NM			Due Date:	5 Day TAT	1														Cool: Cool	ol	Me	OH: Me	MeOH: Me
Sampler's Name:	Gilbert Moreno			TAT starts the	TAT starts the day received by the lab if received by																<del>5-</del> (	NIN	OH: Na	NaOH: Na
SAMPLE RECEIPT	PT Temp Blank:		No No	Wet Ice:	Yes No															H <sub>3</sub> PO <sub>4</sub> : HP	ΗP			
Samples Received Intact:	act:		Thermometer ID:	A	Jan 00-	Parar														NaHSO4: NABIS	A: NAB	ງຫ		
Sample Custody Seals:	als: Yes No	NA	Temperature Reading:	Reading:	1.0 C	P					0	000-4-140 Othani of Octor	Chan	0				-		Zn Acetate+NaOH: Zn	ate+Na	IOH: Z	'n	ł: Zn
Total Containers:			Corrected Temperature:	emperature:	0.1	P	RIDE	015)	8021											VaOH+,	Ascorb	ic Acio	t: SAPC	NaOH+Ascorbic Acid: SAPC
Sample Identification	ntification	Matrix	Date Sampled	Time Sampled	Depth Co	Grab/ # of Comp Cont		трн (8	BTEX											Sa	Imple	Com	ments	Sample Comments
BH12	2	s	02.16.23	10:40	12' Gr	Grab/ 1	×	×	×		-	-												
BH12	2		02.16.23	10:50	15' Gr	Grab/ 1	×	×	×		+	+	-	T										
BH12	2	s	02.16.23	11:00	20' Gr	Grab/ 1	×	×	×		-	+	┢	+-							Inci	Incident ID	D	ntID
BH12	2	S	02.16.23	11:10	26' Gr	Grab/ 1	×	×	×		-	+	+								APP2	23112	6594	nAPP2231126594
	>				A	1	+	+				+	-											
	2 an	0																						
	(MYU)						╫				+	+	+											
						+	+	-				+	+	1										
Total 200.7 / 6010	010 200.8 / 6020:	020:		BRCRA 13F	CRA 13PPM Texas 11 Al	S 11 AI		As Ba	Sb As Ba Be B Cd Ca C	Cd Ca		ž C	0 11 1	Mg		TI NI K	Se /	Ag SiO <sub>2</sub>	) <sub>2</sub> Na	Sr TI 45 1 /	Sn U 7470 /	J V Z		/ Zn 471
volte: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and share of \$5 for each sample sore verses incurred by the client if such losses are due to circumstances beyond the control of service. Eurofins Xenco, a minimum charae of \$56 no will be anolised to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiations are the submitted to Eurofins Xenco, but not analyzed.	document and relinguing the liable only f	or the cost	of samples cons of samples an	stitutes a valid Ind shall not ass	purchase order ume any respo	from clie nsibility fo	nt comp or any lo	any to Eu sses or e	urofins Xe Eurofins	nco, its a incurred Xenco, b	filiates a by the cliq at not ana	nd subco Int if such lyzed. Th	ntractors b losses :	. It assigned the second secon	ctors. It assigns standard terms and conditions ses are due to circumstances beyond the control terms will be enforced unless previously negotiated.	lard ten stances unless	ns and beyond	condition the contribution	ns rol liated.					
Relinquistigd by: (Signature)	/: (Signature)		Received	Received by: (Signature)	iture)		Dat	Date/Time		Rel	Relinquished by: (Si	ed by: (	Signature)	ure)		Rece	ived b	Received by: (Signature)	nature			Date	Time	Date/Time
190)	Ru	0	lue t	dp		D	·1- 2	23	160%	20											1			
-				1		+				4					T									
						-				σ											Revised D	ate: 08/25	Revised Date: 08/25/2020 Rev. 2020.2	ansonon Rev 2020

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12 13

#### Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 4145 List Number: 1 Creator: Stutzman, Amanda

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	

#### Job Number: 890-4145-1 SDG Number: 03A1987062

List Source: Eurofins Carlsbad

Eurofins Carlsbad Released to Imaging: 2/17/2025 2:02:20 PM

#### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 4145 List Number: 2 Creator: Teel, Brianna

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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	True	

Job Number: 890-4145-1 SDG Number: 03A1987062

List Source: Eurofins Midland List Creation: 02/21/23 11:18 AM

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Received by OCD: 4/15/2024 2:04:17 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Devon Team Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 2/27/2023 4:29:39 PM

# JOB DESCRIPTION

North Brushy PW Line SDG NUMBER 03A1987062

# **JOB NUMBER**

890-4144-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

Received by OCD: 4/15/2024 2:04:17 PM

# **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

RAMER

Generated 2/27/2023 4:29:39 PM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Laboratory Job ID: 890-4144-1 SDG: 03A1987062

# **Table of Contents**

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Method Summary	20
Sample Summary	21
	22
	23

LOD

LOQ

MCL

MDA

MDC

MDL

MPN

MQL

NC

ND

NEG

POS

PQL PRES

QC

RER

RPD

TEF

TEQ TNTC

RL

ML

	Definitions/Glossary		
Client: Ensolur Project/Site: N	m Iorth Brushy PW Line	Job ID: 890-4144-1 SDG: 03A1987062	2
Qualifiers			
			3
GC VOA			
	Qualifier Description		
F1 F2	MS and/or MSD recovery exceeds control limits. MS/MSD RPD exceeds control limits		
			5
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			8
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		9
Glossary			10
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		4.0
DER	Duplicate Error Ratio (normalized absolute difference)		13
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)		

Limit of Detection (DoD/DOE)

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Method Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

Not Detected at the reporting limit (or MDL or EDL if shown)

Minimum Detectable Activity (Radiochemistry)

4

#### Job ID: 890-4144-1 SDG: 03A1987062

#### Job ID: 890-4144-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

Project/Site: North Brushy PW Line

#### Narrative

Job Narrative 890-4144-1

#### Receipt

The samples were received on 2/17/2023 4:06 PM. 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 0.2°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: BH13 (890-4144-1), BH13 (890-4144-2), BH13 (890-4144-3), BH13 (890-4144-4) and BH13 (890-4144-5).

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-47145 and analytical batch 880-47140 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision 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: Surrogate recovery for the following sample was outside control limits: (MB 880-47117/1-A). Evidence of matrix interferences is not obvious.

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.

Job ID: 890-4144-1 SDG: 03A1987062

## **Client Sample ID: BH13**

Project/Site: North Brushy PW Line

Date Collected: 02/16/23 11:20 Date Received: 02/17/23

Client: Ensolum

Lab Sample ID: 890-4144-1

#### Matrix: Solid

Date Collected: 02/16/23 11:20								Watr	x: 5011a	
Date Received: 02/17/23 16:06 Sample Depth: 13'										
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)	)							5
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	< 0.00199	U	0.00199		mg/Kg		02/24/23 09:38	02/24/23 19:02	1	
Toluene	<0.00199	U	0.00199		mg/Kg		02/24/23 09:38	02/24/23 19:02	1	
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/24/23 09:38	02/24/23 19:02	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/24/23 09:38	02/24/23 19:02	1	
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/24/23 09:38	02/24/23 19:02	1	8
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/24/23 09:38	02/24/23 19:02	1	
										0
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	3
4-Bromofluorobenzene (Surr)	113		70 - 130				02/24/23 09:38	02/24/23 19:02	1	
1,4-Difluorobenzene (Surr)	109		70 - 130				02/24/23 09:38	02/24/23 19:02	1	
Method: TAL SOP Total BTEX - To	otal BTEX Calo	culation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/27/23 16:41	1	
 Method: SW846 8015 NM - Diese	Range Organ	ics (DRO) (	GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	13
Total TPH	<50.0		50.0		mg/Kg			02/24/23 13:21	1	
		5	00.0					32,2 20 10.21		

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/24/23 03:51	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/24/23 03:51	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/24/23 03:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130				02/23/23 17:07	02/24/23 03:51	1
o-Terphenyl	98		70 - 130				02/23/23 17:07	02/24/23 03:51	1

Method: EPA 300.0 - Anions, Ion C	hromatography - So	oluble					
Analyte	Result Qualifier	r RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7570	50.3	mg/Kg			02/22/23 23:47	10

#### **Client Sample ID: BH13** Date Collected: 02/16/23 11:30 Date Received: 02/17/23 16:06

Sample Depth: 17'

Г

Method: SW846 8021B - Volat	ile Organic Comp	ounds (GC	)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/24/23 09:38	02/24/23 19:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/24/23 09:38	02/24/23 19:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/24/23 09:38	02/24/23 19:22	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/24/23 09:38	02/24/23 19:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/24/23 09:38	02/24/23 19:22	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/24/23 09:38	02/24/23 19:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				02/24/23 09:38	02/24/23 19:22	1

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Lab Sample ID: 890-4144-2

Matrix: Solid

#### Released to Imaging: 2/17/2025 2:02:20 PM

#### **Client Sample Results**

Job ID: 890-4144-1 SDG: 03A1987062

Lab Sample ID: 890-4144-2

#### **Client Sample ID: BH13**

Project/Site: North Brushy PW Line

Date Collected: 02/16/23 11:30 Date Received: 02/17/23 16:06

#### Sample Depth: 17'

Client: Ensolum

Method: SW846 8021B	- Volatile Organic Com	pounds (GC) (Continued)
	Volutile Organie Con	

Surrogate 1,4-Difluorobenzene (Surr)	<b>%Recovery</b> 110	Qualifier	Limits				Prepared 02/24/23 09:38	Analyzed 02/24/23 19:22	Dil Fac
_ Method: TAL SOP Total BTE	X - Total BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/27/23 16:41	1
	iesel Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/24/23 13:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/24/23 04:13	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/24/23 04:13	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/24/23 04:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				02/23/23 17:07	02/24/23 04:13	1
o-Terphenyl	97		70 - 130				02/23/23 17:07	02/24/23 04:13	1

#### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2610	25.1	mg/Kg			02/22/23 23:53	5

#### **Client Sample ID: BH13**

Date Collected: 02/16/23 11:40 Date Received: 02/17/23 16:06 Sample Depth: 22'

# Lab Sample ID: 890-4144-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/24/23 09:38	02/24/23 19:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/24/23 09:38	02/24/23 19:43	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/24/23 09:38	02/24/23 19:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/24/23 09:38	02/24/23 19:43	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/24/23 09:38	02/24/23 19:43	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/24/23 09:38	02/24/23 19:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				02/24/23 09:38	02/24/23 19:43	1
1,4-Difluorobenzene (Surr)	107		70 - 130				02/24/23 09:38	02/24/23 19:43	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398	U	0.00398		mg/Kg			02/27/23 16:41	1

Method: SW846 8015 NM - Diesel F	Range Organi	ics (DRO) (0	GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	[	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg				02/24/23 13:21	1

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Matrix: Solid

5

Job ID: 890-4144-1 SDG: 03A1987062

Lab Sample ID: 890-4144-4

Matrix: Solid

# **Client Sample ID: BH13**

Project/Site: North Brushy PW Line

Date Collected: 02/16/23 11:40 Date Received: 02/17/23 16:06

Sample Depth: 22'

Client: Ensolum

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		02/23/23 17:07	02/24/23 04:36	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		02/23/23 17:07	02/24/23 04:36	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/23/23 17:07	02/24/23 04:36	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				02/23/23 17:07	02/24/23 04:36	1
o-Terphenyl	110		70 - 130				02/23/23 17:07	02/24/23 04:36	1

#### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4590	49.8	mg/Kg			02/23/23 00:00	10

#### **Client Sample ID: BH13**

#### Date Collected: 02/16/23 11:50

#### Date Received: 02/17/23 16:06

Sample	e Depth	: 25'
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/24/23 09:38	02/24/23 20:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/24/23 09:38	02/24/23 20:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/24/23 09:38	02/24/23 20:03	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/24/23 09:38	02/24/23 20:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/24/23 09:38	02/24/23 20:03	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/24/23 09:38	02/24/23 20:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130				02/24/23 09:38	02/24/23 20:03	1
							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	00/04/00 00 00	1
1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX			70 - 130				02/24/23 09:38	02/24/23 20:03	,
	- Total BTEX Cal	Qualifier	70 - 130	MDL	Unit mg/Kg	<u>D</u>	02/24/23 09:38 Prepared	Analyzed 02/27/23 16:41	Dil Fac
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Die	- Total BTEX Cale Result <0.00401	Qualifier U ics (DRO) (	RL 0.00401		mg/Kg		Prepared	Analyzed 02/27/23 16:41	1
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Die Analyte	- Total BTEX Cale Result <0.00401	Qualifier U ics (DRO) ( Qualifier	RL	MDL MDL		<u>D</u>		Analyzed	Dil Fac
Method: TAL SOP Total BTEX Analyte	- Total BTEX Cale Result <0.00401 esel Range Organ Result <49.9	Qualifier U ics (DRO) ( Qualifier U	RL 0.00401 GC) RL 49.9		mg/Kg Unit		Prepared	Analyzed 02/27/23 16:41 Analyzed	1
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Die Analyte Total TPH Method: SW846 8015B NM - D	- Total BTEX Cale Result <0.00401 esel Range Organ Result <49.9	Qualifier U ics (DRO) ( Qualifier U	RL 0.00401 GC) RL 49.9		mg/Kg Unit		Prepared	Analyzed 02/27/23 16:41 Analyzed	1
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Die Analyte Total TPH	- Total BTEX Cale Result <0.00401 esel Range Organ Result <49.9	Qualifier U ics (DRO) ( Qualifier U nics (DRO) Qualifier	RL 0.00401 GC) (GC)	MDL	mg/Kg Unit mg/Kg	D	Prepared Prepared	Analyzed 02/27/23 16:41 Analyzed 02/24/23 13:21	Dil Fac

Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg	02/23/23 17:07	02/24/23 04:58	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130		02/23/23 17:07	02/24/23 04:58	1
o-Terphenyl	113		70 - 130		02/23/23 17:07	02/24/23 04:58	1

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		Clien	t Sample R	Results	;				
Client: Ensolum Project/Site: North Brushy PW Line								Job ID: 890 SDG: 03A1	
Client Sample ID: BH13 Date Collected: 02/16/23 11:50 Date Received: 02/17/23 16:06 Sample Depth: 25'							Lab Sar	nple ID: 890- Matri	4144-/ x: Soli
Method: EPA 300.0 - Anions, Ion C Analyte		hy - Soluble Qualifier	e RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	2060		24.8		mg/Kg			02/23/23 00:06	
Client Sample ID: BH13							Lab Sar	nple ID: 890-	4144-
Date Collected: 02/16/23 12:00 Date Received: 02/17/23 16:06 Sample Depth: 30'								Matri	x: Soli
Method: SW846 8021B - Volatile O Analyte		ounds (GC) Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00198	U	0.00198		mg/Kg		02/24/23 09:38	02/24/23 20:24	
Toluene	<0.00198	U	0.00198		mg/Kg		02/24/23 09:38	02/24/23 20:24	
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/24/23 09:38	02/24/23 20:24	
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		02/24/23 09:38	02/24/23 20:24	
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/24/23 09:38	02/24/23 20:24	
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/24/23 09:38	02/24/23 20:24	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	116		70 - 130				02/24/23 09:38	02/24/23 20:24	
1,4-Difluorobenzene (Surr) 	108		70 - 130				02/24/23 09:38	02/24/23 20:24	
- Method: TAL SOP Total BTEX - Tot	al BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00396	U	0.00396		mg/Kg			02/27/23 16:41	
- Method: SW846 8015 NM - Diesel F	Range Organ	ics (DRO) (0	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			02/24/23 13:21	
_ Method: SW846 8015B NM - Diesel	Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/23/23 17:07	02/24/23 05:20	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/23/23 17:07	02/24/23 05:20	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/23/23 17:07	02/24/23 05:20	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	93		70 - 130				02/23/23 17:07	02/24/23 05:20	
o-Terphenyl	105		70 - 130				02/23/23 17:07	02/24/23 05:20	
_ Method: EPA 300.0 - Anions, Ion C	hromatograp	ohy - Soluble	e						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chlorido	2250		24.8		ma/Ka			02/23/23 00.24	

02/23/23 00:24

Chloride

24.8

mg/Kg

#### Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

Percent Surrogate Recovery (Acceptance Limits) BFB1 DFBZ1 Client Sample ID (70-130) (70-130) Lab Sample ID 890-4144-1 BH13 113 109 890-4144-2 BH13 114 110 890-4144-3 BH13 114 107 **BH13** 890-4144-4 113 110 890-4144-5 BH13 116 108 Matrix Spike 890-4176-A-1-F MS 110 110 890-4176-A-1-G MSD Matrix Spike Duplicate 91 97 LCS 880-47145/1-A Lab Control Sample 105 113 LCSD 880-47145/2-A Lab Control Sample Dup 109 114 MB 880-47145/5-A Method Blank 107 103

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

_				Percent Surrogate Recove
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-4138-A-1-D MS	Matrix Spike	99	97	
890-4138-A-1-E MSD	Matrix Spike Duplicate	101	100	
890-4144-1	BH13	85	98	
890-4144-2	BH13	86	97	
890-4144-3	BH13	94	110	
890-4144-4	BH13	100	113	
890-4144-5	BH13	93	105	
LCS 880-47117/2-A	Lab Control Sample	97	104	
LCSD 880-47117/3-A	Lab Control Sample Dup	95	103	
MB 880-47117/1-A	Method Blank	132 S1+	155 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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#### Job ID: 890-4144-1 SDG: 03A1987062

Prep Type: Total/NA

Prep Type: Total/NA

Client: Ensolum

#### Job ID: 890-4144-1 SDG: 03A1987062

Project/Site: North Brushy PW Line

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

Lab Sample ID: MB 880-4714 Matrix: Solid Analysis Batch: 47140	15/5-A								Client S	ample ID: I Prep T Prep		otal/NA
	N	IB MB										
Analyte	Res	ult Qualifier	RL		MDL	Unit	D	Р	repared	Analyz	ed	Dil Fa
Benzene	< 0.002	00 U	0.00200			mg/Kg		02/2	4/23 09:38	02/24/23 1	3:39	
Toluene	< 0.002	00 U	0.00200			mg/Kg		02/2	4/23 09:38	02/24/23 1	3:39	
Ethylbenzene	< 0.002	00 U	0.00200			mg/Kg		02/2	4/23 09:38	02/24/23 1	3:39	
m-Xylene & p-Xylene	<0.004	00 U	0.00400			mg/Kg		02/2	4/23 09:38	02/24/23 1	3:39	
o-Xylene	<0.002	00 U	0.00200			mg/Kg		02/2	4/23 09:38	02/24/23 1	3:39	
Xylenes, Total	<0.004	00 U	0.00400			mg/Kg		02/2	4/23 09:38	02/24/23 1	3:39	
Surrogate		MB MB ery Qualifier	Limits					P	repared	Analyz	ed.	Dil Fa
4-Bromofluorobenzene (Surr)		07	70 - 130						4/23 09:38			2
1,4-Difluorobenzene (Surr)		03	70 - 130						4/23 09:38			
-												
Lab Sample ID: LCS 880-471	45/1-A							Client	Sample	ID: Lab Co		
Matrix: Solid										Prep T	ype: To	otal/N
Analysis Batch: 47140										Prep	Batch	: 4714
			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Quali	fier Unit		D	%Rec	Limits		
Benzene			0.100	0.1052		mg/K	g		105	70 - 130		
Toluene			0.100	0.1026		mg/K	g		103	70 - 130		
Ethylbenzene			0.100	0.1063		mg/K	g		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2265		mg/K	g		113	70 - 130		
o-Xylene			0.100	0.1103		mg/K	g		110	70 - 130		
	LCS L	cs										
Surrogate	%Recovery Q	Qualifier	Limits									
4-Bromofluorobenzene (Surr)	105		70 - 130									
1,4-Difluorobenzene (Surr)	113		70 - 130									
Lab Sample ID: LCSD 880-4	74 45/2 4						Clien	+ Com		.ab Contro	Some	
Matrix: Solid	/ 145/2-A						Clien	t San	ipie iD. L			
										Prep T		
Analysis Batch: 47140			Spike	LCSD	1.095	<b>`</b>				%Rec	Batch	RP
Analyte			Added	Result				D	%Rec	Limits	RPD	Lim
Benzene			0.100	0.1112	Quan		a			70 - 130	6	3
Toluene			0.100	0.1112		mg/K mg/K			108	70 - 130 70 - 130	6	3
						mg/K	-		100	70 - 130 70 - 130	0 7	3
Ethylbenzene			0 100	0 11 1 2		mg/K			114	10 - 130		· · ·
m Vulana & n Vulana			0.100	0.1143		· · · · · · · · · · · · · · · · · · ·	- · · ·		100	70 400	0	
m-Xylene & p-Xylene			0.200	0.2444		mg/K	g		122	70 <u>-</u> 130	8	3
m-Xylene & p-Xylene o-Xylene						· · · · · · · · · · · · · · · · · · ·	g		122 118	70 <sub>-</sub> 130 70 <sub>-</sub> 130	8 7	3
	LCSD L	CSD	0.200	0.2444		mg/K	g					3
o-Xylene Surrogate	LCSD L %Recovery Q		0.200 0.100 Limits	0.2444		mg/K	g					3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr)			0.200 0.100	0.2444		mg/K	g					3
o-Xylene Surrogate	%Recovery Q		0.200 0.100 Limits	0.2444		mg/K	g					3:
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery 0 109 114		0.200 0.100 <i>Limits</i> 70 - 130	0.2444		mg/K	g		118	70 - 130	7	3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-4176-A-	%Recovery 0 109 114		0.200 0.100 <i>Limits</i> 70 - 130	0.2444		mg/K	g		118	70 - 130 Sample ID:	7 Matrix	3 3 c <b>Spik</b>
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-4176-A- Matrix: Solid	%Recovery 0 109 114		0.200 0.100 <i>Limits</i> 70 - 130	0.2444		mg/K	g		118	70 - 130 Sample ID: Prep T	7 Matrix ype: To	3 3 c Spik otal/N
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-4176-A-	%Recovery G	Qualifier	0.200 0.100 <i>Limits</i> 70 - 130 70 - 130	0.2444 0.1181	Me	mg/K	g		118	70 - 130 Sample ID: Prep T Prep	7 Matrix	3 3 c Spik otal/N
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-4176-A- Matrix: Solid Analysis Batch: 47140	%Recovery 0 109 114 1-F MS Sample S	Qualifier	0.200 0.100 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b>	0.2444 0.1181	MS	mg/K mg/K	g	Γ	118 Client	70 - 130 Sample ID: Prep T Prep %Rec	7 Matrix ype: To	3 3 c Spike otal/N/
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-4176-A- Matrix: Solid	%Recovery G	Qualifier	0.200 0.100 <i>Limits</i> 70 - 130 70 - 130 Spike Added	0.2444 0.1181		mg/K mg/K	g	<b>D</b>	118	70 - 130 Sample ID: Prep T Prep	7 Matrix ype: To	3 3 c Spik otal/N

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### Released to Imaging: 2/17/2025 2:02:20 PM

<0.00201 U

Toluene

0.1008

mg/Kg

100

70 - 130

0.100

2/27/2023

MS MS

Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

Result

0.1064

0.2271

0.1082

Spike

Added

0.100

0.201

0.100

Limits 70 - 130

70 - 130

Client: Ensolum Project/Site: North Brushy PW Line

Lab Sample ID: 890-4176-A-1-F MS

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 47140

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

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

Sample Sample

<0.00201

<0.00402 U

<0.00201 U

%Recovery

**Result Qualifier** 

U

MS MS

110

110

97

Qualifier

Job ID: 890-4144-1 SDG: 03A1987062

<b>Client Sample ID:</b>	Matrix Spike Duplicate
	Prep Type: Total/NA

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

106

113

107

D

Matrix: Solid Analysis Batch: 47140

Lab Sample ID: 890-4176-A-1-G MSD

Analysis Batch: 47140									Prep	Batch:	47145
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F2 F1	0.0990	0.06350	F2 F1	mg/Kg		64	70 - 130	44	35
Toluene	<0.00201	U	0.0990	0.07320		mg/Kg		74	70 - 130	32	35
Ethylbenzene	<0.00201	U	0.0990	0.08077		mg/Kg		82	70 - 130	27	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1666		mg/Kg		84	70 - 130	31	35
o-Xylene	<0.00201	U	0.0990	0.07791		mg/Kg		78	70 - 130	33	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	91		70 - 130								

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

#### Lab Sample ID: MB 880-47117/1-A **Client Sample ID: Method Blank** Matrix: Solid Prep Type: Total/NA Analysis Batch: 46994 Prep Batch: 47117 MB MB Result Qualifier RL MDL Unit D Prepared Analyte Analvzed <50.0 U 50.0 02/23/23 17:07 02/23/23 20:30 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 02/23/23 17:07 02/23/23 20:30 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 02/23/23 17:07 02/23/23 20:30 mg/Kg MB MB %Recovery Qualifier Limits Prepared Surrogate Analyzed 1-Chlorooctane 132 S1+ 70 - 130 02/23/23 17:07 02/23/23 20:30 155 S1+ 70 - 130 02/23/23 17:07 02/23/23 20:30 o-Terphenyl Client Sample ID: Lab Control Sample

70 - 130

#### Lab Sample ID: LCS 880-47117/2-A Matrix: Solid Analysis Batch: 46994

Analysis Batch: 46994							Prep	Batch: 47117
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1169		mg/Kg		117	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1008		mg/Kg		101	70 - 130	
C10-C28)								

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** Prep Type: Total/NA Prep Batch: 47145

**Released to Imaging: 2/17/2025 2:02:20 PM** 

Dil Fac

1

1

1

1

1

Dil Fac

Lab Sample ID: LCS 880-47117/2-A

Lab Sample ID: LCSD 880-47117/3-A

Lab Sample ID: 890-4138-A-1-D MS

Matrix: Solid

Surrogate

o-Terphenyl

Analyte

C10-C28)

Surrogate

o-Terphenyl

Analyte

1-Chlorooctane

Matrix: Solid

(GRO)-C6-C10

1-Chlorooctane

Matrix: Solid

Analysis Batch: 46994

Analysis Batch: 46994

Gasoline Range Organics (GRO)-C6-C10

Diesel Range Organics (Over

Analysis Batch: 46994

Gasoline Range Organics

**Diesel Range Organics (Over** 

### **QC Sample Results**

Client: Ensolum Project/Site: North Brushy PW Line

### Method: 8015B NM - Diesel Range Org

LCS

97

104

LCSD

95

103

Sample

Result

<49.8

<49.8 U

%Recovery

%Recovery

							SDG	6: 03A19	87062	
ganics (D	DRO) (GC)	(Continue	ed)							
					Client	Sample	e ID: Lab Co	ontrol Sa	ample	
								Гуре: То		
							Prep	Batch:	47117	
LCS										5
Qualifier	Limits									
	70 - 130									
	70 - 130									-
				Cliev	-+ Com		l ch Contro	Somel	- Dun	7
				Cher	n Sam	ipie iu:	Lab Contro	Fype: To		
								Batch:		ð
	Spike	LCSD	LCSD				%Rec	Batom	RPD	0
	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	3
	1000	1067		mg/Kg		107	70 - 130	9	20	
	1000	999.2		mg/Kg		100	70 - 130	1	20	
	1000	999.2		Ing/r\y		100	70 - 130	I	20	
LCSD										
Qualifier	Limits									
	70 - 130									4.0
	70 - 130									13
						Client	Sample ID	: Matrix	Spike	
							Prep 1	Гуре: То	tal/NA	
								Batch:	47117	
Sample	Spike	MS			_	~-	%Rec			
Qualifier	Added		Qualifier	Unit	D	%Rec	Limits			
U	1000	969.6		mg/Kg		92	70 - 130			

mg/Kg

C10-C28)			
	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	97		70 - 130

#### Lab Sample ID: 890-4138-A-1-E MSD Matrix: Solid

#### Analysis Batch: 46994

Analysis Batch: 46994									Prep	Batch:	47117
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1000	997.9		mg/Kg		95	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.8	U	1000	967.7		mg/Kg		95	70 - 130	3	20
	MED	MED									

1000

936.4

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	100		70 - 130

Prep Type: Total/NA

## **Client Sample ID: Matrix Spike Duplicate**

70 - 130

92

Job ID: 890-4144-1

Client: Ensolum

### **QC Sample Results**

Job ID: 890-4144-1 SDG: 03A1987062

Project/Site: North Brushy PW Line Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-46848/1-A												Client S	Sample ID:	Method	Blank
Matrix: Solid														Type: S	
Analysis Batch: 46984															
		МВ	мв												
Analyte	R	esult	Qualifier		RL		MDL	Unit		D	P	repared	Analy	/zed	Dil Fac
Chloride	<	<5.00	U		5.00			mg/Kg					02/22/23	3 22:21	1
Lab Sample ID: LCS 880-46848/2-A	4									Cli	ent	Sample	e ID: Lab C	Control S	ample
Matrix: Solid													Prep	o Type: S	oluble
Analysis Batch: 46984															
				Spike		LCS	LCS						%Rec		
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits		
Chloride				250		232.9			mg/Kg			93	90 - 110		
Lab Sample ID: LCSD 880-46848/3	-A								Cli	ient S	Sam	ple ID:	Lab Contr	ol Samp	le Dup
Matrix: Solid												-	Prep	o Type: S	oluble
Analysis Batch: 46984													-		
				Spike		LCSD	LCS	D					%Rec		RPD
Analyte				Added		Result	Qual	lifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride				250		232.7			mg/Kg			93	90 - 110	0	20
Lab Sample ID: 890-4144-4 MS													Client Sa	mple ID	: BH13
Matrix: Solid													Prep	o Type: S	oluble
Analysis Batch: 46984															
	Sample	Samp	ole	Spike		MS	MS						%Rec		
Analyte	Result	Quali	ifier	Added		Result	Qual	lifier	Unit		D	%Rec	Limits		
Chloride	2060			1240		3404			mg/Kg			108	90 - 110		
Lab Sample ID: 890-4144-4 MSD													Client Sa	mple ID	BH13
Matrix: Solid														Type: S	
Analysis Batch: 46984															
	Sample	Samp	ole	Spike		MSD	MSD	)					%Rec		RPD
Analyte	Result	Quali	ifier	Added		Result	Qual	lifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride	2060			1240		3396			mg/Kg		_	108	90 - 110	0	20

## **QC Association Summary**

Client: Ensolum Project/Site: North Brushy PW Line

5 6

Job ID: 890-4144-1 SDG: 03A1987062

### **GC VOA**

#### Analysis Batch: 47140

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4144-1	BH13	Total/NA	Solid	8021B	47145
890-4144-2	BH13	Total/NA	Solid	8021B	47145
890-4144-3	BH13	Total/NA	Solid	8021B	47145
890-4144-4	BH13	Total/NA	Solid	8021B	47145
890-4144-5	BH13	Total/NA	Solid	8021B	47145
MB 880-47145/5-A	Method Blank	Total/NA	Solid	8021B	47145
LCS 880-47145/1-A	Lab Control Sample	Total/NA	Solid	8021B	47145
LCSD 880-47145/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	47145
890-4176-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	47145
890-4176-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	47145

#### Prep Batch: 47145

LCS 880-47145/1-A	Lab Control Sample	Iotal/NA	Solid	8021B	47145
LCSD 880-47145/2-/	A Lab Control Sample Dup	Total/NA	Solid	8021B	47145 8
890-4176-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	47145
890-4176-A-1-G MS	D Matrix Spike Duplicate	Total/NA	Solid	8021B	47145 9
Prep Batch: 4714	5				10
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4144-1	BH13	Total/NA	Solid	5035	11
890-4144-2	BH13	Total/NA	Solid	5035	
890-4144-3	BH13	Total/NA	Solid	5035	
890-4144-4	BH13	Total/NA	Solid	5035	
890-4144-5	BH13	Total/NA	Solid	5035	19
MB 880-47145/5-A	Method Blank	Total/NA	Solid	5035	13
LCS 880-47145/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-47145/2-/	A Lab Control Sample Dup	Total/NA	Solid	5035	
890-4176-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-4176-A-1-G MS	D Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 47359

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batcl
890-4144-1	BH13	Total/NA	Solid	Total BTEX	
890-4144-2	BH13	Total/NA	Solid	Total BTEX	
890-4144-3	BH13	Total/NA	Solid	Total BTEX	
890-4144-4	BH13	Total/NA	Solid	Total BTEX	
890-4144-5	BH13	Total/NA	Solid	Total BTEX	

### GC Semi VOA

#### Analysis Batch: 46994

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4144-1	BH13	Total/NA	Solid	8015B NM	47117
890-4144-2	BH13	Total/NA	Solid	8015B NM	47117
890-4144-3	BH13	Total/NA	Solid	8015B NM	47117
890-4144-4	BH13	Total/NA	Solid	8015B NM	47117
890-4144-5	BH13	Total/NA	Solid	8015B NM	47117
MB 880-47117/1-A	Method Blank	Total/NA	Solid	8015B NM	47117
LCS 880-47117/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47117
LCSD 880-47117/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47117
890-4138-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	47117
890-4138-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47117
Prep Batch: 47117					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4144-1	BH13	Total/NA	Solid	8015NM Prep	
890-4144-2	BH13	Total/NA	Solid	8015NM Prep	

### **QC Association Summary**

### GC Semi VOA (Continued)

#### Prep Batch: 47117 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4144-3	BH13	Total/NA	Solid	8015NM Prep	
890-4144-4	BH13	Total/NA	Solid	8015NM Prep	
890-4144-5	BH13	Total/NA	Solid	8015NM Prep	
MB 880-47117/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47117/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47117/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4138-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4138-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 47172

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4144-1	BH13	Total/NA	Solid	8015 NM	
890-4144-2	BH13	Total/NA	Solid	8015 NM	
890-4144-3	BH13	Total/NA	Solid	8015 NM	
890-4144-4	BH13	Total/NA	Solid	8015 NM	
890-4144-5	BH13	Total/NA	Solid	8015 NM	

### HPLC/IC

#### Leach Batch: 46848

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4144-1	BH13	Soluble	Solid	DI Leach	
890-4144-2	BH13	Soluble	Solid	DI Leach	
890-4144-3	BH13	Soluble	Solid	DI Leach	
890-4144-4	BH13	Soluble	Solid	DI Leach	
890-4144-5	BH13	Soluble	Solid	DI Leach	
MB 880-46848/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46848/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46848/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4144-4 MS	BH13	Soluble	Solid	DI Leach	
890-4144-4 MSD	BH13	Soluble	Solid	DI Leach	

#### Analysis Batch: 46984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4144-1	BH13	Soluble	Solid	300.0	46848
890-4144-2	BH13	Soluble	Solid	300.0	46848
890-4144-3	BH13	Soluble	Solid	300.0	46848
890-4144-4	BH13	Soluble	Solid	300.0	46848
890-4144-5	BH13	Soluble	Solid	300.0	46848
MB 880-46848/1-A	Method Blank	Soluble	Solid	300.0	46848
LCS 880-46848/2-A	Lab Control Sample	Soluble	Solid	300.0	46848
LCSD 880-46848/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46848
890-4144-4 MS	BH13	Soluble	Solid	300.0	46848
890-4144-4 MSD	BH13	Soluble	Solid	300.0	46848

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#### Job ID: 890-4144-1 SDG: 03A1987062

Project/Site: North Brushy PW Line

5 6

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Job ID: 890-4144-1 SDG: 03A1987062

### Lab Sample ID: 890-4144-1 Matrix: Solid

Lab Sample ID: 890-4144-2

Lab Sample ID: 890-4144-3

Lab Sample ID: 890-4144-4

Matrix: Solid

Matrix: Solid

Date Collected: 02/16/23 11:20 Date Received: 02/17/23 16:06

**Client Sample ID: BH13** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	47145	02/24/23 09:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/24/23 19:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47359	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47172	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47117	02/23/23 17:07	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/24/23 03:51	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		10			46984	02/22/23 23:47	СН	EET MID

### **Client Sample ID: BH13**

### Date Collected: 02/16/23 11:30

Date Received: 02/17/23 16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	47145	02/24/23 09:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/24/23 19:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47359	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47172	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	47117	02/23/23 17:07	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/24/23 04:13	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		5			46984	02/22/23 23:53	СН	EET MID

### **Client Sample ID: BH13**

## Date Collected: 02/16/23 11:40

Date	Recei	ved:	02/17	7/23 <sup>-</sup>	16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	47145	02/24/23 09:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/24/23 19:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47359	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47172	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	47117	02/23/23 17:07	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/24/23 04:36	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		10			46984	02/23/23 00:00	CH	EET MID

#### **Client Sample ID: BH13** Date Collected: 02/16/23 11:50 Date Received: 02/17/23 16:06

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	47145	02/24/23 09:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/24/23 20:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47359	02/27/23 16:41	SM	EET MID

**Eurofins Carlsbad** 

Matrix: Solid

Project/Site: North Brushy PW Line

Job ID: 890-4144-1 SDG: 03A1987062

### Lab Sample ID: 890-4144-4 Matrix: Solid

Lab Sample ID: 890-4144-5

#### **Client Sample ID: BH13** Date Collected: 02/16/23 11:50 Date Received: 02/17/23 16:06

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			47172	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47117	02/23/23 17:07	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/24/23 04:58	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		5			46984	02/23/23 00:06	СН	EET MID

### **Client Sample ID: BH13** Date Collected: 02/16/23 12:00

#### Date Received: 02/17/23 16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	47145	02/24/23 09:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/24/23 20:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47359	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47172	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47117	02/23/23 17:07	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/24/23 05:20	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	46848	02/21/23 13:16	KS	EET MID
Soluble	Analysis	300.0		5			46984	02/23/23 00:24	СН	EET MID

#### Laboratory References:

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

Matrix: Solid

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	Accreditation/Co	ertification Summary		
Client: Ensolum Project/Site: North Brushy PW Line			Job ID: 890-4144-1 SDG: 03A1987062	
Laboratory: Eurofins Midland				
Unless otherwise noted, all analytes for this laboratory				
Authority	Program	Identification Number	Expiration Date	
Texas	NELAP	T104704400-22-25	06-30-23	E
The following analytes are included in this report	t. but the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for which	5
the agency does not offer certification.	.,			
Analysis Method Prep Method	Matrix	Analyte		
8015 NM	Solid	Total TPH		
Total BTEX	Solid	Total BTEX		
				8
				9
				10
				13

Eurofins Carlsbad

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### **Method Summary**

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-4144-1 SDG: 03A1987062

lethod	Method Description	Protocol	Laboratory
021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal BTEX	Total BTEX Calculation	TAL SOP	EET MID
015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
0.00	Anions, Ion Chromatography	EPA	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
01 Leach	Deionized Water Leaching Procedure	ASTM	EET MID
Protocol Refe ASTM = A	srences: STM International		
EPA = US	Environmental Protection Agency		
SW846 =	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Ed	ition, November 1986 And Its Updates.	
TAL SOP	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R			
EET MID	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

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Released to Imaging: 2/17/2025 2:02:20 PM

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-4144-1 SDG: 03A1987062

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
90-4144-1	BH13	Solid	02/16/23 11:20	02/17/23 16:06	13'
90-4144-2	BH13	Solid	02/16/23 11:30	02/17/23 16:06	17'
90-4144-3	BH13	Solid	02/16/23 11:40	02/17/23 16:06	22'
90-4144-4	BH13	Solid	02/16/23 11:50	02/17/23 16:06	25'
90-4144-5	BH13	Solid	02/16/23 12:00	02/17/23 16:06	30'

	Xenco			EL Pas Hobbs	30, TX (91 , NM (575	5) 585-3443, t ) 392-7550, C	EL Pase, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	794-1296 988-3199			Data
Project Manager: Gilbert	Gilbert Moreno		Bi	Bill to: (if different)		Jim Raley				Work Order Comments	ments
	m		Co	Company Name:		WPX			rogram: UST/PS	Program: UST/PST 🗌 PRP 🗌 Brownfields 🗌 RRC 🗌	ds 🗌 RRC 🗌 Superfund 🗌
	3122 National Parks HWY	IWY	Ad	Address:	53	5315 Buena Vista Dr.	sta Dr.		State of Project:		
le ZIP:	Carlsbad, NM 88220		Cit	City, State ZIP:	Ca	Carlsbad, NM 88220	18220		Reporting: Level II	Reporting: Level III Level III LPST/UST L TRRP	
	832-541-7719		Email: gn	Email: gmoreno@Ensolum.com, jim.raley@dvn.com	olum.co	m, jim.raley	@dvn.com		Deliverables: EDD	ADaPT	Other:
Name:	North Brushy PW Line		Turn Around	ound				ANALYSIS REQUEST	EST		Preservative Codes
n.	87062		✓ Routine [		Pres. Code					Non	None: NO DI Water: H <sub>2</sub> O
Project Location: Eddy, NM	NM	D	Due Date:	5 Day TAT						Coo	⊻
	Gilbert Moreno		TAT starts the day received by	ay received by					_	HCL	
CC #: 9001900347	00347		the lab, if received by 4:30pm	ed by 4:30pm	ers					H <sub>2</sub> S	H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp Blank: v	Veg No	Wet Ice:	Yes No	nete	).0)				H <sub>3</sub> Pi	H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	Yes No	Thermometer ID:	P	1400m		. 300				Nat	NaHSU4: NABIS
Cooler Custody Seals:	No	Correction Factor:	ctor:	0.0			80	890-4144 Chain of Custody		7	Zn Acotatot NaOH: Zn
Sample Custody Seals:	Yes No NA	Temperature Reading:	Reading:	10.4		)		-	(man)		NaOH+Assorbic Asid: SAPC
Sample Identification	on Matrix	Date Sampled		Depth Grab/ Comp	Cont	CHLORI	BTEX (8				Sample Comments
BH13	S	$\vdash$	11:20 13'	Grab/			×				
BH13	s	02.16.23	11:30 17'	" Grab/	-	×	×				
BH13	s	02.16.23	11:40 22'	Grab/		×	×				Incident ID
BH13	s	02.16.23	11:50 25	Grab/	<u> </u>	××	×				nAPP2231126594
BH13	U.	02.16.23	12:00 30	Grab/		×	×				
			$\left  \right $								
	to the										
0					L						
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	200.8 / 6020: al(s) to be analy		8RCRA 13PPM TCLP / SPLP	CRA 13PPM Texas 11 AI	AI Sb /	As Ba Be I o As Ba Be	B Cd Ca C Cd Cr Co	Co Cu Fe Pb Cu Pb Mn Mo I	Mg Mn Mo Ni K Ni Se Ag Ti U	Se A	vg SiO <sub>2</sub> Na Sr TI Sn U V Zn Hg:1631/245.1/7470/7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$86.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiat	t and relinquishment liable only for the co arge of \$85.00 will be	of samples consti st of samples and applied to each p	itutes a valid pure shall not assume roject and a char	chase order from e any responsibili ge of \$5 for each	client corr Ity for any sample su	npany to Eurofi losses or expendent abmitted to Euro	is Xenco, its affiliate ises incurred by the fins Xenco, but not	s and subcontractors. It client if such losses are analyzed. These terms w	assigns standard ter due to circumstances ill be enforced unless	ontractors. It assigns standard terms and conditions in losses are due to circumstances beyond the control hese terms will be enforced unless previously negotiated.	
Relinquished by: (Signature)	ature)	Received	Received by: (Signature)	(e)	D	Date/Time	Relinquished by:	shed by: (Signature)	e) Rece	Received by: (Signature)	Date/Time
X	2	XCR	SA-		011	156.61	606				
3	(	(					4				

### Received by OCD: 4/15/2024 2:04:17 PM

### 2/27/2023

Chain of Custody

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### Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 4144 List Number: 1 Creator: Stutzman, Amanda

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	

Job Number: 890-4144-1 SDG Number: 03A1987062

Eurofins Carlsbad
Released to Imaging: 2/17/2025 2:02:20 PM

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Job Number: 890-4144-1 SDG Number: 03A1987062

List Source: Eurofins Midland

List Creation: 02/21/23 11:18 AM

### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 4144 List Number: 2 Creator: Teel, Brianna

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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	True	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Eurofins Carlsbad
Released to Imaging: 2/17/2025 2:02:20 PM

Received by OCD: 4/15/2024 2:04:17 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Devon Team Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 2/28/2023 3:59:36 PM

# JOB DESCRIPTION

North Brushy PW Line SDG NUMBER 03A1987062

## **JOB NUMBER**

890-4149-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

Received by OCD: 4/15/2024 2:04:17 PM

## **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

RAMER

Generated 2/28/2023 3:59:36 PM

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

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Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

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CNF

DER

DL

DLC

EDL

LOD LOQ

MCL MDA

MDC MDL

ML

MPN

MQL

NC

ND NEG

POS

PQL PRES

QC

RER

RL RPD

TEF

TEQ

TNTC

Dil Fac

DL, RA, RE, IN

Contains No Free Liquid

Detection Limit (DoD/DOE)

Estimated Detection Limit (Dioxin) Limit of Detection (DoD/DOE)

Limit of Quantitation (DoD/DOE)

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Method Quantitation Limit

Dilution Factor

Duplicate Error Ratio (normalized absolute difference)

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level"

Not Detected at the reporting limit (or MDL or EDL if shown)

Minimum Detectable Activity (Radiochemistry) Minimum Detectable Concentration (Radiochemistry)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

	Definitions/Glossary	
Client: Ensolu		Job ID: 890-4149-1
Project/Site: N	North Brushy PW Line	SDG: 03A1987062
Qualifiers		
GC VOA		
Qualifier	Qualifier Description	
*+	LCS and/or LCSD is outside acceptance limits, high biased.	
F1	MS and/or MSD recovery exceeds control limits.	
S1-	Surrogate recovery exceeds control limits, low biased.	
S1+	Surrogate recovery exceeds control limits, high biased.	
J	Indicates the analyte was analyzed for but not detected.	
GC Semi VO	Α	
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	
F1	MS and/or MSD recovery exceeds control limits.	
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.	
a	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	

Job ID: 890-4149-1 SDG: 03A1987062

#### Job ID: 890-4149-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

Project/Site: North Brushy PW Line

#### Narrative

Job Narrative 890-4149-1

#### Receipt

The samples were received on 2/17/2023 4:06 PM. 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 0.2°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: BH10 (890-4149-1), BH10 (890-4149-2), BH10 (890-4149-3) and BH10 (890-4149-4).

#### GC VOA

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-47012 and analytical batch 880-47064 recovered outside control limits for the following analytes: Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-47012 and analytical batch 880-47064 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision 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 880-47146 and analytical batch 880-47130 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

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-46850 and analytical batch 880-47079 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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Job ID: 890-4149-1 SDG: 03A1987062

### **Client Sample ID: BH10**

Project/Site: North Brushy PW Line

Date Collected: 02/16/23 09:00 Date Received: 02/17/23 16:06

Sample Depth: 5'

Client: Ensolum

Lab Sample ID: 890-4149-1

Matrix: Solid

5

Method: SW846 8021B - Volatile		Qualifier			Unit	D	Dronered	Analized	
Analyte				MDL	Unit		Prepared 02/23/23 13:30	Analyzed 02/24/23 00:25	Dil Fa
Benzene	< 0.00199		0.00199		mg/Kg		02/23/23 13:30	02/24/23 00:25	
Toluene					mg/Kg				
Ethylbenzene	< 0.00199		0.00199		mg/Kg		02/23/23 13:30	02/24/23 00:25	
m-Xylene & p-Xylene	< 0.00398		0.00398		mg/Kg		02/23/23 13:30	02/24/23 00:25	
o-Xylene Xylenes, Total	<0.00199 <0.00398		0.00199 0.00398		mg/Kg mg/Kg		02/23/23 13:30 02/23/23 13:30	02/24/23 00:25 02/24/23 00:25	
					ing/itg				
Surrogate	%Recovery	Qualifier					Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	213						02/23/23 13:30	02/24/23 00:25	
1,4-Difluorobenzene (Surr)	66	S1-	70 - 130				02/23/23 13:30	02/24/23 00:25	
Method: TAL SOP Total BTEX - T	otal BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/28/23 16:48	
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (0	GC)						
Analyte		Qualifier	, RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			02/24/23 13:40	
Method: SW846 8015B NM - Dies	el Range Orga	nice (DRO)	(60)						
Analyte	• •	Qualifier	RL	мы	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<49.9		49.9		mg/Kg		02/23/23 17:02	02/24/23 04:36	
(GRO)-C6-C10	10.0	0	10.0		mg/rtg		02/20/20 11:02	02/2 1/20 0 1.00	
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		02/23/23 17:02	02/24/23 04:36	
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/23/23 17:02	02/24/23 04:36	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	86		70 - 130				02/23/23 17:02	02/24/23 04:36	
o-Terphenyl	91		70 - 130				02/23/23 17:02	02/24/23 04:36	
Method: EPA 300.0 - Anions, Ion	Chromatogram	hy - Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	11800	F1	99.6		mg/Kg			02/23/23 14:33	20
lient Sample ID: BH10							Lah Sar	nple ID: 890-	4149-:
ate Collected: 02/16/23 09:10							Lub Oui		x: Soli
ate Received: 02/17/23 16:06								Iviau	x. 30iii
ample Depth: 9'									
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)							
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U *+	0.00199		mg/Kg		02/23/23 13:30	02/24/23 00:51	
Toluene	<0.00199	U *+	0.00199		mg/Kg		02/23/23 13:30	02/24/23 00:51	
	.0.00400	11*1							
Ethylbenzene	< 0.00199	U T	0.00199		mg/Kg		02/23/23 13:30	02/24/23 00:51	

<0.00398 U\*+

<0.00199 U\*+

<0.00398 U\*+

02/24/23 00:51

02/24/23 00:51

02/24/23 00:51

m-Xylene & p-Xylene

o-Xylene

Xylenes, Total

0.00398

0.00199

0.00398

mg/Kg

mg/Kg

mg/Kg

02/23/23 13:30

02/23/23 13:30

02/23/23 13:30

1

1

1

1

Dil Fac

### **Client Sample Results**

Job ID: 890-4149-1 SDG: 03A1987062

### **Client Sample ID: BH10**

Project/Site: North Brushy PW Line

Date Collected: 02/16/23 09:10 Date Received: 02/17/23 16:06

#### Sample Depth: 9'

Client: Ensolum

Method: SW846 8021B	- Volatile Organic Compounds	s (GC) (Continued)
	· volatile organic oompound	

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	98		70 - 130				02/23/23 13:30	02/24/23 00:51	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/28/23 16:48	1
Method: SW846 8015 NM - Die Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result <49.9		RL	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 02/24/23 13:40	Dil Fac
		C C	1010					02/2 //20 10110	
Method: SW846 8015B NM - D	iesel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		02/23/23 17:02	02/24/23 04:58	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		02/23/23 17:02	02/24/23 04:58	1
C10-C28)									

Oll Range Organics (Over C28-C36)	<49.9 U	49.9	mg/Kg	02/23/23 17:02	02/24/23 04:58	1
Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	80	70 - 130		02/23/23 17:02	02/24/23 04:58	1
o-Terphenyl	85	70 - 130		02/23/23 17:02	02/24/23 04:58	1

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8280	50.5	mg/Kg			02/23/23 14:51	10

#### **Client Sample ID: BH10**

Date Collected: 02/16/23 09:20 Date Received: 02/17/23 16:06

### Sample Depth: 15'

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		02/23/23 13:30	02/24/23 01:17	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		02/23/23 13:30	02/24/23 01:17	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		02/23/23 13:30	02/24/23 01:17	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		02/23/23 13:30	02/24/23 01:17	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		02/23/23 13:30	02/24/23 01:17	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		02/23/23 13:30	02/24/23 01:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	207	S1+	70 - 130				02/23/23 13:30	02/24/23 01:17	1
1,4-Difluorobenzene (Surr)	64	S1-	70 - 130				02/23/23 13:30	02/24/23 01:17	1
Method: TAL SOP Total BTEX -	Total BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398		0.00398		mg/Kg			02/28/23 16:48	1

Method: SW846 8015 NM - Diesel F	Range Organi	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/24/23 13:40	1

Eurofins Carlsbad

Lab Sample ID: 890-4149-3

Matrix: Solid

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Lab Sample ID: 890-4149-2 Matrix: Solid

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Job ID: 890-4149-1 SDG: 03A1987062

Lab Sample ID: 890-4149-4

Matrix: Solid

### **Client Sample ID: BH10**

Project/Site: North Brushy PW Line

Date Collected: 02/16/23 09:20 Date Received: 02/17/23 16:06

Sample Depth: 15'

Client: Ensolum

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/24/23 09:54	02/24/23 05:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/24/23 09:54	02/24/23 05:20	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/24/23 09:54	02/24/23 05:20	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130				02/24/23 09:54	02/24/23 05:20	1
o-Terphenyl	102		70 - 130				02/24/23 09:54	02/24/23 05:20	1

### Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	642		4.96		mg/Kg			02/23/23 14:57	1

#### **Client Sample ID: BH10**

#### Date Collected: 02/16/23 09:30

#### Date Received: 02/17/23 16:06

Sample Depth: 20'

o-Terphenyl

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201		mg/Kg		02/23/23 13:30	02/24/23 01:44	1
Toluene	<0.00201	U *+	0.00201		mg/Kg		02/23/23 13:30	02/24/23 01:44	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		02/23/23 13:30	02/24/23 01:44	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		02/23/23 13:30	02/24/23 01:44	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		02/23/23 13:30	02/24/23 01:44	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		02/23/23 13:30	02/24/23 01:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	198	S1+	70 - 130				02/23/23 13:30	02/24/23 01:44	1
1,4-Difluorobenzene (Surr)	80		70 - 130				02/23/23 13:30	02/24/23 01:44	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/24/23 13:40	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
							00/04/02 00:54	00/04/02 05:44	
5 5	<50.0	U	50.0		mg/Kg		02/24/23 09:54	02/24/23 05:41	1
(GRO)-C6-C10 Diesel Range Organics (Over	<50.0 <50.0		50.0 50.0		mg/Kg		02/24/23 09:54	02/24/23 05:41	1
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28)		U							1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<50.0	U U	50.0		mg/Kg		02/24/23 09:54	02/24/23 05:41	1

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02/24/23 05:41

02/24/23 09:54

Lab Sample ID: 890-4149-3 Matrix: Solid

5

92

70 - 130

1

		Client S	ample R	esults	5					1
Client: Ensolum Project/Site: North Brushy PW Line								Job ID: 890 SDG: 03A		2
Client Sample ID: BH10 Date Collected: 02/16/23 09:30							Lab Sa	mple ID: 890- Matri	4149-4 ix: Solid	
Date Received: 02/17/23 16:06 Sample Depth: 20'										4
Method: EPA 300.0 - Anions, Ion Cl Analyte		hy - Soluble Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	5
Chloride	521		5.00		mg/Kg		1.000.00	02/23/23 15:41	1	
										8
										9
										13

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#### Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

#### Percent Surrogate Recovery (Acceptance Limits) BFB1 DFBZ1 Client Sample ID (70-130) (70-130) Lab Sample ID 880-25104-A-2-B MS Matrix Spike 215 S1+ 82 880-25104-A-2-C MSD Matrix Spike Duplicate 235 S1+ 76 890-4149-1 BH10 213 S1+ 66 S1-BH10 890-4149-2 276 S1+ 98 890-4149-3 BH10 207 S1+ 64 S1-890-4149-4 BH10 198 S1+ 80 LCS 880-47012/1-A Lab Control Sample 227 S1+ 72 LCSD 880-47012/2-A Lab Control Sample Dup 81 229 S1+ MB 880-47012/5-A Method Blank 151 S1+ 67 S1-

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

-			
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4137-A-1-D MS	Matrix Spike	108	102
890-4137-A-1-E MSD	Matrix Spike Duplicate	102	97
890-4147-A-1-G MS	Matrix Spike	118	99
890-4147-A-1-H MSD	Matrix Spike Duplicate	115	99
890-4149-1	BH10	86	91
890-4149-2	BH10	80	85
890-4149-3	BH10	100	102
890-4149-4	BH10	84	92
LCS 880-47116/2-A	Lab Control Sample	111	109
LCS 880-47146/2-A	Lab Control Sample	111	99
LCSD 880-47116/3-A	Lab Control Sample Dup	102	103
LCSD 880-47146/3-A	Lab Control Sample Dup	114	104
MB 880-47116/1-A	Method Blank	135 S1+	138 S1+
MB 880-47146/1-A	Method Blank	139 S1+	134 S1+

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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6

Prep Type: Total/NA

Prep Type: Total/NA

Project/Site: North Brushy PW Line

Client: Ensolum

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

Lab Sample ID: MB 880-47012/5-A Matrix: Solid									Client Sa	mple ID: Metho Prep Type: <sup>-</sup>	
Analysis Batch: 47064										Prep Batcl	
	MB	MB									
Analyte	Result	Qualifier	RL		MDL Uni	t	D	Pr	epared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/	′Kg		02/23	3/23 11:00	02/23/23 15:38	1
Toluene	<0.00200	U	0.00200		mg/	′Kg		02/23	3/23 11:00	02/23/23 15:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/	′Kg		02/23	3/23 11:00	02/23/23 15:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/	′Kg		02/23	3/23 11:00	02/23/23 15:38	1
o-Xylene	<0.00200	U	0.00200		mg/	′Kg		02/23	3/23 11:00	02/23/23 15:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/	′Kg		02/23	3/23 11:00	02/23/23 15:38	1
	МВ	МВ									
Surrogate	%Recovery	Qualifier	Limits					Pr	repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	151	S1+	70 - 130					02/23	3/23 11:00	02/23/23 15:38	1
1,4-Difluorobenzene (Surr)	67	S1-	70 - 130					02/23	3/23 11:00	02/23/23 15:38	1
- Lab Sample ID: LCS 880-47012/1-A							C	lient	Sample	ID: Lab Control	Sample
Matrix: Solid										Prep Type: <sup>-</sup>	rotal/NA
Analysis Batch: 47064										Prep Batcl	n: 47012
-			Spike	LCS	LCS					• %Rec	
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1735	*+	mg/Kg		174	70 - 130	
Toluene	0.100	0.1746	*+	mg/Kg		175	70 - 130	
Ethylbenzene	0.100	0.1732	*+	mg/Kg		173	70 - 130	
m-Xylene & p-Xylene	0.200	0.3532	*+	mg/Kg		177	70 - 130	
o-Xylene	0.100	0.1600	*+	mg/Kg		160	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	227	S1+	70 - 130
1,4-Difluorobenzene (Surr)	72		70 - 130

### Lab Sample ID: LCSD 880-47012/2-A

### Matrix: Solid

nalysis Batch: 47064						Prep Batch: 47012				
	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1387	*+	mg/Kg		139	70 - 130	22	35	
Toluene	0.100	0.1457	*+	mg/Kg		146	70 - 130	18	35	
Ethylbenzene	0.100	0.1526	*+	mg/Kg		153	70 - 130	13	35	
m-Xylene & p-Xylene	0.200	0.3120	*+	mg/Kg		156	70 - 130	12	35	
o-Xylene	0.100	0.1487	*+	mg/Kg		149	70 - 130	7	35	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	229	S1+	70 - 130
1,4-Difluorobenzene (Surr)	81		70 - 130

### Lab Sample ID: 880-25104-A-2-B MS

## Matrix: Solid

Analysis Batch: 47064									Prep	Batch:	47012	
	Sample	Sample	Spike	MS	MS				%Rec			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits			
Benzene	<0.00199	U *+ F1	0.101	0.1519	F1	mg/Kg		151	70 - 130			
Toluene	<0.00199	U *+ F1	0.101	0.1448	F1	mg/Kg		144	70 - 130			

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Prep Type: Total/NA

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**Client Sample ID: Matrix Spike** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Released to Imaging: 2/17/2025 2:02:20 PM

MS MS

0.1386 F1

0.2810 F1

0.1275

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.101

0.201

0.101

Limits 70 - 130

70 - 130

70 - 130

70 - 130

Client: Ensolum Project/Site: North Brushy PW Line

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 47064

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Lab Sample ID: 880-25104-A-2-B MS

Sample Sample

<0.00199 U\*+ F1

<0.00398 U\*+ F1

<0.00199 U\*+ F1

MS MS

215 S1+

%Recovery Qualifier

82

235 S1+

76

138 S1+

**Result Qualifier** 

Job ID: 890-4149-1 SDG: 03A1987062

Prep Type: Total/NA

Prep Batch: 47012

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

138

140

127

D

# 2 3 4 5 6 7 8 9 10 11

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

**Client Sample ID: Method Blank** 

02/23/23 20:30

Client Sample ID: Lab Control Sample

02/23/23 17:02

Prep Type: Total/NA Prep Batch: 47116

Matrix: Solid Analysis Batch: 47064

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Lab Sample ID: 880-25104-A-2-C MSD

Analysis Batch: 47064									Prep	Batch:	47012	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	<0.00199	U *+ F1	0.0990	0.1597	F1	mg/Kg		161	70 - 130	5	35	
Toluene	<0.00199	U *+ F1	0.0990	0.1509	F1	mg/Kg		152	70 - 130	4	35	i
Ethylbenzene	<0.00199	U *+ F1	0.0990	0.1499	F1	mg/Kg		151	70 - 130	8	35	
m-Xylene & p-Xylene	<0.00398	U *+ F1	0.198	0.3011	F1	mg/Kg		152	70 - 130	7	35	ŝ
o-Xylene	<0.00199	U *+ F1	0.0990	0.1474	F1	mg/Kg		149	70 - 130	14	35	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									

Mothod: 8015B		Pango Or	anice		
Method: 8015B	INIM - Diesei	Range Org	yanics	UKU)	

Lab Sample ID: MB 880-47116/1-A
Matrix: Solid
Analysis Batch: 46992

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/23/23 17:02	02/23/23 20:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/23/23 17:02	02/23/23 20:30	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/23/23 17:02	02/23/23 20:30	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	135	S1+	70 - 130				02/23/23 17:02	02/23/23 20:30	1

70 - 130

Lab Sample ID: LCS 880-47116/2-A
Matrix: Solid
Analysis Batch: 46002

o-Terphenyl

Analysis Batch: 46992						Batch: 47116		
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	935.8		mg/Kg		94	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1034		mg/Kg		103	70 - 130	
C10-C28)								

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Prep Type: Total/NA

1

Client: Ensolum Project/Site: North Brushy PW Line

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

Lab Sample ID: LCS 880-47	'116/2-A						Client	Sample	ID: Lab Co		-
Matrix: Solid									Prep T	ype: To	tal/NA
Analysis Batch: 46992									Prep	Batch:	47116
	LCS	LCS									
Surrogate	%Recovery		Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	109		70 - 130								
Lab Sample ID: LCSD 880-4	17116/3-A					Clier	nt Sam	nple ID:	Lab Contro	I Sampl	e Dup
Matrix: Solid									Prep T	ype: To	tal/NA
Analysis Batch: 46992									Prep	Batch:	47116
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	849.0		mg/Kg		85	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	922.0		mg/Kg		92	70 - 130	11	20
	LCSD	LCSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	103		70 - 130								
Lab Sample ID: 890-4137-A	-1-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep T	ype: To	tal/NA
Analysis Batch: 46992									Prep	Batch:	47116
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.8	U	1000	1169		mg/Kg		114	70 - 130		
(GRO)-C6-C10	10.0		1000								
Diesel Range Organics (Over	<49.8	U	1000	934.3		mg/Kg		93	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	108		70 - 130								
o-Terphenyl	102		70 - 130								
Γ											
Lab Sample ID: 890-4137-A	-1-E MSD					CI	ient Sa	ample ID	: Matrix Sp		
Matrix: Solid										ype: To	
Analysis Batch: 46992										Batch:	
		Sample	Spike		MSD		_		%Rec		RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.8	U	1000	1116		mg/Kg		108	70 - 130	5	20
(GRO)-C6-C10 Diesel Range Organics (Over	<49.8	U	1000	897.5		mg/Kg		90	70 - 130	4	20
C10-C28)	~49.0	0	1000	097.5		myny		90	10 - 100	4	20
/											
	MSD	MSD									

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	97		70 - 130

Job ID: 890-4149-1

SDG: 03A1987062

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

Job ID: 890-4149-1

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۲ ۶ ۵ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶ ۶	Result           <50.0           <50.0           MB           overy           139           134	U U MB Qualifier S1+ S1+	Limi 70 - 70 - 70 - 70 - 1000 1000 1000 1000	130	LCS Result 915.9 925.7		mg/Kg mg/Kg	I	- 02/ 02/ 02/ 02/ 02/ 02/	24 2  24 2  24 2  24 2  24 2  24/2  24/2  24/2	pared 23 08:14 23 08:14 23 08:14 23 08:14 23 08:14 23 08:14 <b>Sample I</b> <b>%Rec</b> 92 93	Analyz 02/24/23 ( 02/24/23 ( 02/24/23 ( 02/24/23 ( 02/24/23 ( 02/24/23 ( 02/24/23 ( 02/24/23 ( 02/24/23 ( 02/24/23 (	Batch           ed           08:40           08:40           08:40           08:40           08:40           08:40           obs:40	: 4714 Dil Fa Dil Fa Samplo
۲ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵	Result           <50.0           <50.0           MB           overy           139           134	Qualifier U U MB Qualifier S1+ S1+	70 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -	50.0 50.0 50.0 <i>its</i> 130	LCS Result 915.9	LCS	mg/Kg mg/Kg	Unit mg/Kg	02/ 02/ 02/ 02/ 02/ 02/ 02/ 02/	24 2  24 2  24 2  24 2  24 2  24/2  24/2  24/2	23 08:14 23 08:14 23 08:14 23 08:14 23 08:14 23 08:14 5 ample I 5 ample I 92	Analyz 02/24/23 ( 02/24/23 ( 02/24)))))))))))))))))))))))))))))))))))	ed 08:40 08:40 08:40 08:40 08:40 08:40 08:40 00:10 19 10 10 10 10 10 10 10 10 10 10	Dil Fa Dil Fa Sample otal/NA
۲ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵ ۵	Result           <50.0           <50.0           MB           overy           139           134	Qualifier U U MB Qualifier S1+ S1+	70 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -	50.0 50.0 50.0 <i>its</i> 130	LCS Result 915.9	LCS	mg/Kg mg/Kg	Unit mg/Kg	02/ 02/ 02/ 02/ 02/ 02/ 02/ 02/	24 2  24 2  24 2  24 2  24 2  24/2  24/2  24/2	23 08:14 23 08:14 23 08:14 23 08:14 23 08:14 23 08:14 5 ample I 5 ample I 92	02/24/23 0 02/24/23 0 0 <b>Prep T</b> <b>Prep</b> <b>%Rec</b> <b>Limits</b> 70 - 130	08:40 08:40 08:40 08:40 08:40 08:40 08:40	Dil Fa Sampl Total/N
۲ ۵ ۵ ۵ ۵ ۲ ۵ ۲ ۵ ۲ ۵ ۲ ۲ ۲ ۲ ۲ ۲ ۲	<50.0 <50.0 MB 0very 139 134	U U MB Qualifier S1+ S1+	70 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -	50.0 50.0	<b>Result</b> 915.9		mg/Kg	Unit mg/Kg	02/ 02/ 02/ 02/ Clier	/24/2 /24/2 /24/2 /24/2 /24/2	23 08:14 23 08:14 23 08:14 23 08:14 23 08:14 5ample I 5ample I 92 —	02/24/23 0 02/24/23 0 0 <b>Prep T</b> <b>Prep</b> <b>%Rec</b> <b>Limits</b> 70 - 130	08:40 08:40 08:40 08:40 08:40 08:40 08:40	Dil Fa Sampl Total/N
< %Reco LCS vvery	<50.0 MB overy 139 134 134 LCS Qua	U MB Qualifier S1+ S1+	70 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -	50.0	<b>Result</b> 915.9		mg/Kg	Unit mg/Kg	02/ 02/ 02/ Clier	/24/2 Prej /24/2 /24/2	23 08:14 pared 23 08:14 23 08:14 Sample I Sample I 92 —	02/24/23 ( Analyz 02/24/23 ( 02/24/23 ( 02/24) ( 02/24/23 ( 02/24) (	08:40 ed 08:40 08:40 ontrol S	Dil Fa Sampl otal/N
< %Reco LCS vvery	<50.0 MB overy 139 134 134 LCS Qua	U MB Qualifier S1+ S1+	70 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -	50.0	<b>Result</b> 915.9		mg/Kg	Unit mg/Kg	02/ 02/ 02/ Clier	/24/2 Prej /24/2 /24/2	23 08:14 pared 23 08:14 23 08:14 Sample I Sample I 92 —	02/24/23 ( Analyz 02/24/23 ( 02/24/23 ( 02/24) ( 02/24/23 ( 02/24) (	08:40 ed 08:40 08:40 ontrol S	Dil Fa Sampl otal/N
LCS	MB           overy           139           134           134           LCS           Qua	MB Qualifier S1+ S1+	70 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -	i <b>ts</b> 130	<b>Result</b> 915.9			Unit mg/Kg	02 02 <b>Clier</b>	Prej /24// /24//	pared 23 08:14 23 08:14 Sample I %Rec 92	Analyz 02/24/23 ( 02/24/23 ( D: Lab Cc Prep T Prep %Rec Limits 70 - 130	ed 08:40 08:40 ontrol S	Dil Fa Sampl otal/N
LCS	MB           overy           139           134           134           LCS           Qua	MB Qualifier S1+ S1+	70 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -	i <b>ts</b> 130	<b>Result</b> 915.9			Unit mg/Kg	02 02 <b>Clier</b>	Prej /24// /24//	pared 23 08:14 23 08:14 Sample I %Rec 92	Analyz 02/24/23 ( 02/24/23 ( D: Lab Cc Prep T Prep %Rec Limits 70 - 130	ed 08:40 08:40 ontrol S	Samp otal/N
LCS	overy 139 134	Qualifier S1+ S1+	70 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -	130	<b>Result</b> 915.9		lifier	mg/Kg	02, 02, Clier	/24/: /24/: nt S	23 08:14 23 08:14 Sample I %Rec 92	02/24/23 0 02/24/23 0 02/24/23 0 Prep T Prep T %Rec Limits 70 - 130	08:40 08:40 ontrol S ype: T	Sampl otal/N
LCS	139 134	S1+ S1+	70 - 70 - 70 - 70 - 70 - 70 - 70 - 70 -	130	<b>Result</b> 915.9		lifier	mg/Kg	02, 02, Clier	/24/: /24/: nt S	23 08:14 23 08:14 Sample I %Rec 92	02/24/23 0 02/24/23 0 02/24/23 0 Prep T Prep T %Rec Limits 70 - 130	08:40 08:40 ontrol S ype: T	Sampl otal/N
overy	134	S1+	70 - Spike Added 1000 1000 Limits 70 - 130		<b>Result</b> 915.9		lifier	mg/Kg	02, Clier	/24//	23 08:14 Sample I %Rec 92	02/24/23 ( ID: Lab Co Prep T Prep %Rec Limits 70 - 130	08:40 ontrol S ype: T	otal/N
overy	LCS Qua		<b>Spike</b> <b>Added</b> 1000 1000 <u>Limits</u> 70 - 130	130	<b>Result</b> 915.9		lifier	mg/Kg	Clier	nt S	Sample I %Rec 92	ID: Lab Cc Prep T Prep %Rec Limits 70 - 130	ontrol S ype: T	otal/N
overy	Qua		Added 1000 1000 <i>Limits</i> 70 - 130		<b>Result</b> 915.9		lifier	mg/Kg			% <b>Rec</b>	Prep T Prep %Rec Limits 70 - 130	ype: T	otal/N
overy	Qua		Added 1000 1000 <i>Limits</i> 70 - 130		<b>Result</b> 915.9		lifier	mg/Kg			% <b>Rec</b>	Prep T Prep %Rec Limits 70 - 130	ype: T	otal/N
overy	Qua		Added 1000 1000 <i>Limits</i> 70 - 130		<b>Result</b> 915.9		lifier	mg/Kg	<u>D</u>		92	Prep %Rec Limits 70 - 130		
overy	Qua		Added 1000 1000 <i>Limits</i> 70 - 130		<b>Result</b> 915.9		lifier	mg/Kg	D		92	%Rec Limits 70 - 130	Batch	
overy	Qua		Added 1000 1000 <i>Limits</i> 70 - 130		<b>Result</b> 915.9		lifier	mg/Kg	<u>D</u>		92	Limits 70 - 130		
overy	Qua		1000 1000 <u>Limits</u> 70 - 130		915.9	Quai	litter	mg/Kg	D		92	70 - 130		
overy	Qua		1000 Limits 70 - 130											
overy	Qua		Limits 70 - 130		925.7			mg/Kg			93	70 - 130		
overy	Qua		Limits 70 - 130					5.5						
overy	Qua		70 - 130											
overy	Qua		70 - 130											
-			70 - 130											
99														
								Clie	ent Sa	mp	le ID: La	ab Contro	I Samp	ole Du
												Prep T	ype: T	otal/N
												Prep	Batch	: 4714
			Spike		LCSD	LCSI	D					%Rec		RP
			Added		Result	Qual	lifier	Unit	D		%Rec	Limits	RPD	
			1000		972.6			mg/Kg			97	70 - 130	6	2
			1000		957.1			malka			96	70 - 130	3	2
			1000		957.1			mg/Kg			90	70 - 130	3	2
		_												
	LCS													
114	Qua	lifier	Limits											
			70 - 130 70 - 130											
104			70 - 130											
											Client S	Sample ID:	Matri	x Spik
														-
	Sam	nple	Spike		MS	MS						%Rec		
mple		-	Added		Result	Qual	lifier	Unit	D		%Rec	Limits		
-			997		1106			mg/Kg		_	111	70 - 130		
esult														
esult											92	70 - 130		
	esult	-	mple Sample tesult Qualifier	esult Qualifier Added	esult Qualifier Added	esult Qualifier Added Result	esult Qualifier Added Result Qua	QualifierAddedResultQualifier<49.9	QualifierAddedResultQualifierUnit<49.9	QualifierAddedResultQualifierUnitD<49.9	ImpleSampleSpikeMSMSImpleQualifierAddedResultQualifierUnitDImpleU9971106mg/Kg	mple Sample Spike MS MS lesult Qualifier Added Result Qualifier Unit D %Rec	Prep T       Imple     Sample     Spike     MS     MS     %Rec       Lesult     Qualifier     Added     Result     Qualifier     Unit     D     %Rec       V     997     1106     mg/Kg     111     70 - 130	QualifierAddedResultQualifierUnitD%RecLimits<49.9

Client: Ensolum Project/Site: North Brushy PW Line

Matrix: Solid

Surrogate

Analysis Batch: 47130

Lab Sample ID: 890-4147-A-1-G MS

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

MS MS

%Recovery Qualifier

## Page 247 of 540

			D: 890-4 : 03A198		2
	Client	Sample ID:	Matrix	Spike	3
		Prep T	ype: Tot	al/NA	4
		Prep	Batch:	47146	5
					6
Client S	ample ID	): Matrix Sp	vike Dun	licate	7
Unone et		Prep T	ype: Tol Batch:	al/NA	8
		%Rec		RPD	9
D					
	%Rec	Limits		Limit	
		70 - 130	<b>RPD</b> 3	20	10
					10 11
	108	70 - 130	3	20	10 11 12
	108	70 - 130	3	20	10 11 12 13
	108	70 - 130	3	20	10 11 12 13 14

1-Chlorooctane	118	70 - 130
o-Terphenyl	99	70 - 130
_ Lab Sample ID: 890-4147-A- Matrix: Solid Analysis Batch: 47130	1-H MSD	
	Sample Sample	Spike

Method: 300.0 - Anions, Ion Chromatography

	Sample	Sample	Spike	MSD	MSD				%Rec		RF
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lin
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1077		mg/Kg		108	70 - 130	3	2
Diesel Range Organics (Over	<49.9	U	999	938.5		mg/Kg		92	70 - 130	0	:
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	99		70 _ 130								

Limits

Lab Sample ID: MB 880-46850/1-A Matrix: Solid										C	lient S	ample ID: I Prep	Лethod Гуре: S	
Analysis Batch: 47079														
	MB	MB												
Analyte	Result	Qualifier		RL		MDL	Unit		D	Prep	ared	Analyz	ed	Dil Fac
Chloride	<5.00	U		5.00			mg/Kg					02/23/23	2:48	1
 Lab Sample ID: LCS 880-46850/2-A									Clien	it S	ample	ID: Lab Co	ntrol S	ample
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 47079														
-			Spike		LCS	LCS						%Rec		
Analyte			Added		Result	Qual	ifier	Unit	D	9	%Rec	Limits		
Chloride			250		237.9			mg/Kg			95	90 - 110		
- Lab Sample ID: LCSD 880-46850/3-A								Cli	ent Sar	npl	e ID: I	Lab Contro	Sampl	e Dup
Matrix: Solid													Гуре: S	
Analysis Batch: 47079														
			Spike		LCSD	LCSI	D					%Rec		RPD
Analyte			Added		Result	Qual	ifier	Unit	D	9	6Rec	Limits	RPD	RPD
														Limit
Chloride			250		238.3			mg/Kg			95	90 - 110	0	
= ' = '			250		238.3			mg/Kg			95	90 <sub>-</sub> 110 Client San		Limit 20
Chloride Lab Sample ID: 890-4149-1 MS Matrix: Solid			250		238.3			mg/Kg			95	Client San		Limit 20 BH10
Lab Sample ID: 890-4149-1 MS			250		238.3			mg/Kg			95	Client San	nple ID:	Limit 20 BH10
Lab Sample ID: 890-4149-1 MS Matrix: Solid	e Sam	ple	250 Spike		238.3 MS	MS		mg/Kg			95	Client San	nple ID:	Limit 20 BH10
Lab Sample ID: 890-4149-1 MS Matrix: Solid Analysis Batch: 47079 Sample	e Sam t Qua							mg/Kg Unit			95 <b>6Rec</b>	Client San Prep	nple ID:	Limit 20 BH10

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-4149-1 SDG: 03A1987062

### Method: 300.0 - Anions, Ion Chromatography (Continued)

ab Sample ID: 890-4149-1 MSI	2								Client San	nole ID:	BH10	
atrix: Solid	·									Type: So		
nalysis Batch: 47079												
nalvto	-	Sample Qualifier	Spike Added		MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
nalyte	11800		4980	18280		mg/Kg	_ <u>-</u>	130	90 - 110	3	20	
						0 0						
												i

### **QC Association Summary**

Client: Ensolum Project/Site: North Brushy PW Line

Job ID: 890-4149-1 SDG: 03A1987062

### **GC VOA**

### Prep Batch: 47012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4149-1	BH10	Total/NA	Solid	5035	
890-4149-2	BH10	Total/NA	Solid	5035	
890-4149-3	BH10	Total/NA	Solid	5035	
890-4149-4	BH10	Total/NA	Solid	5035	
MB 880-47012/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-47012/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-47012/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-25104-A-2-B MS	Matrix Spike	Total/NA	Solid	5035	
880-25104-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 47064

LCSD 880-47012/2-A	Lab Control Sample Dup	Iotal/NA	Solid	5035		
880-25104-A-2-B MS	Matrix Spike	Total/NA	Solid	5035		8
880-25104-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		
Analysis Batch: 47064						9
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	10
890-4149-1	BH10	Total/NA	Solid	8021B	47012	
890-4149-2	BH10	Total/NA	Solid	8021B	47012	44
890-4149-3	BH10	Total/NA	Solid	8021B	47012	
890-4149-4	BH10	Total/NA	Solid	8021B	47012	12
MB 880-47012/5-A	Method Blank	Total/NA	Solid	8021B	47012	
LCS 880-47012/1-A	Lab Control Sample	Total/NA	Solid	8021B	47012	40
LCSD 880-47012/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	47012	13
880-25104-A-2-B MS	Matrix Spike	Total/NA	Solid	8021B	47012	
880-25104-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	47012	14

#### Analysis Batch: 47484

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4149-1	BH10	Total/NA	Solid	Total BTEX	
890-4149-2	BH10	Total/NA	Solid	Total BTEX	
890-4149-3	BH10	Total/NA	Solid	Total BTEX	
890-4149-4	BH10	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 46992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4149-1	BH10	Total/NA	Solid	8015B NM	47116
890-4149-2	BH10	Total/NA	Solid	8015B NM	47116
890-4149-3	BH10	Total/NA	Solid	8015B NM	47146
890-4149-4	BH10	Total/NA	Solid	8015B NM	47146
MB 880-47116/1-A	Method Blank	Total/NA	Solid	8015B NM	47116
LCS 880-47116/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47116
LCSD 880-47116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47116
890-4137-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	47116
890-4137-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47116

#### Prep Batch: 47116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4149-1	BH10	Total/NA	Solid	8015NM Prep	
890-4149-2	BH10	Total/NA	Solid	8015NM Prep	
MB 880-47116/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47116/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4137-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

### **QC Association Summary**

Client: Ensolum Project/Site: North Brushy PW Line

### GC Semi VOA (Continued)

### Prep Batch: 47116 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4137-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 47130					
- Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-47146/1-A	Method Blank	Total/NA	Solid	8015B NM	47146
LCS 880-47146/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47146
LCSD 880-47146/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47146
890-4147-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	47146
890-4147-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47146
Prep Batch: 47146					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4149-3	BH10	Total/NA	Solid	8015NM Prep	
890-4149-4	BH10	Total/NA	Solid	8015NM Prep	
MB 880-47146/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47146/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47146/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4147-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4147-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 47184					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4149-1	BH10	Total/NA	Solid	8015 NM	
890-4149-2	BH10	Total/NA	Solid	8015 NM	
890-4149-3	BH10	Total/NA	Solid	8015 NM	
890-4149-4	BH10	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 46850

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4149-1	BH10	Soluble	Solid	DI Leach	
890-4149-2	BH10	Soluble	Solid	DI Leach	
890-4149-3	BH10	Soluble	Solid	DI Leach	
890-4149-4	BH10	Soluble	Solid	DI Leach	
MB 880-46850/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46850/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46850/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4149-1 MS	BH10	Soluble	Solid	DI Leach	
890-4149-1 MSD	BH10	Soluble	Solid	DI Leach	

#### Analysis Batch: 47079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4149-1	BH10	Soluble	Solid	300.0	46850
890-4149-2	BH10	Soluble	Solid	300.0	46850
890-4149-3	BH10	Soluble	Solid	300.0	46850
890-4149-4	BH10	Soluble	Solid	300.0	46850
MB 880-46850/1-A	Method Blank	Soluble	Solid	300.0	46850
LCS 880-46850/2-A	Lab Control Sample	Soluble	Solid	300.0	46850
LCSD 880-46850/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46850
890-4149-1 MS	BH10	Soluble	Solid	300.0	46850

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5 6

Job ID: 890-4149-1 SDG: 03A1987062

### **QC** Association Summary

Client: Ensolum	
Project/Site: North Brushy PW Line	

Job ID: 890-4149-1 SDG: 03A1987062

### HPLC/IC (Continued)

### Analysis Batch: 47079 (Continued)

Analysis Batch: 47079 (Continued)								
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch			
90-4149-1 MSD	BH10	Soluble	Solid	300.0	46850			

Project/Site: North Brushy PW Line

Job ID: 890-4149-1 SDG: 03A1987062

## Lab Sample ID: 890-4149-1

Lab Sample ID: 890-4149-2

Lab Sample ID: 890-4149-3

Lab Sample ID: 890-4149-4

Matrix: Solid

Matrix: Solid

Matrix: Solid

5 6

9

#### Date Collected: 02/16/23 09:00 Date Received: 02/17/23 16:06

**Client Sample ID: BH10** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	47012	02/23/23 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47064	02/24/23 00:25	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			47484	02/28/23 16:48	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47184	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47116	02/23/23 17:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/24/23 04:36	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	46850	02/22/23 10:00	KS	EET MID
Soluble	Analysis	300.0		20			47079	02/23/23 14:33	CH	EET MID

### **Client Sample ID: BH10**

### Date Collected: 02/16/23 09:10

Date Received: 02/17/23 16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	47012	02/23/23 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47064	02/24/23 00:51	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			47484	02/28/23 16:48	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47184	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47116	02/23/23 17:02	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/24/23 04:58	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	46850	02/22/23 10:00	KS	EET MID
Soluble	Analysis	300.0		10			47079	02/23/23 14:51	СН	EET MID

### **Client Sample ID: BH10**

### Date Collected: 02/16/23 09:20

#### Date Received: 02/17/23 16:06

Batch	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	47012	02/23/23 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47064	02/24/23 01:17	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			47484	02/28/23 16:48	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47184	02/24/23 13:40	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/24/23 05:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47146	02/24/23 09:54	AM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	46850	02/22/23 10:00	KS	EET MID
Soluble	Analysis	300.0		1			47079	02/23/23 14:57	СН	EET MID

#### **Client Sample ID: BH10** Date Collected: 02/16/23 09:30 Date Received: 02/17/23 16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	47012	02/23/23 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47064	02/24/23 01:44	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			47484	02/28/23 16:48	AJ	EET MID

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Matrix: Solid

## Released to Imaging: 2/17/2025 2:02:20 PM
Job ID: 890-4149-1 SDG: 03A1987062

Matrix: Solid

Lab Sample ID: 890-4149-4

#### Client Sample ID: BH10 Date Collected: 02/16/23 09:30

Project/Site: North Brushy PW Line

Client: Ensolum

Date Received: 02/17/23 16:06

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			47184	02/24/23 13:40	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/24/23 05:41	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47146	02/24/23 09:54	AM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	46850	02/22/23 10:00	KS	EET MID
Soluble	Analysis	300.0		1			47079	02/23/23 15:41	СН	EET MID

#### Laboratory References:

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

Eurofins Carlsbad

	Α	ccreditation/C	ertification Summary		
Client: Ensolum Project/Site: North Brus	shy PW Line			Job ID: 890-4149-1 SDG: 03A1987062	2
Laboratory: Eurofi					
Unless otherwise noted, all an					
Authority		ogram	Identification Number	Expiration Date	
Texas	NE	LAP	T104704400-22-25	06-30-23	5
The following analytes a	are included in this report, but	the laboratory is not certif	fied by the governing authority. This list ma	ay include analytes for which	
the agency does not off	fer certification.				
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					40
					10
					4.0
					13

Eurofins Carlsbad

### **Method Summary**

Client: Ensolum Project/Site: North Brushy PW Line Job ID: 890-4149-1 SDG: 03A1987062

Nethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
3015NM Prep	Microextraction	SW846	EET MID
OI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
	Environmental Protection Agency	n November 1006 And Halladetee	
SW846 = '	Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Editi	on, November 1986 And Its Updates.	
TAL SOP :	<ul> <li>TestAmerica Laboratories, Standard Operating Procedure</li> </ul>		
Laboratory R			
EET MID :	Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

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#### Job ID: 890-4149-1 SDG: 03A1987062

#### Client: Ensolum Project/Site: North Brushy PW Line

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4149-1	BH10	Solid	02/16/23 09:00	02/17/23 16:06	5'
890-4149-2	BH10	Solid	02/16/23 09:10	02/17/23 16:06	9'
890-4149-3	BH10	Solid	02/16/23 09:20	02/17/23 16:06	15'
890-4149-4	BH10	Solid	02/16/23 09:30	02/17/23 16:06	20'

## 

Received by OCD: 4/15/2024 2:04:17 PM

3	Relinquished by: (Signature)	Notice: Signature of this of service. Eurofins Xer of Eurofins Xenco. A mi	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed			BH10	BH10	BH10	BH10	Sample Identification	Total Containers:	Sample Custody Seals:	Cooler Custody Seals:	Samples Received Intact:	SAMPLE RECEIPT	CC #	Sampler's Name:	Project Location:	Project Number:	Project Name:	Phone:	City, State ZIP:	Address:	Company Name:	Project Manager:			euro	
	y: (Signature)	document and relingu ico will be liable only for nimum charge of \$85.0	010 200.8 / 6020: and Metal(s) to be an	X		10	10	10	10			als: Yes No	Y		IPT Temp Blank:	9001900347	Gilbert Moreno	Eddy, NM	03A1987062	North Brushy PW Line	832-541-7719	Carlsbad, NM 88220	3122 National Parks HWY	Ensolum	Gilbert Moreno		Xe	eurorins	n
LACELA	C Receiv	ishment of samples c or the cost of samples 10 will be applied to ea	)20: ) analyzed		4 P	S 02.16.23	S 02.16.23		S 02.16.23	Matrix Date Sampled	Corrected	NIR	(N)		ank: Yes No					W Line		8220	arks HWY				Xenco	Environment Testing	
	Received by: (Signature)	onstitutes a valld pu and shall not assum th project and a cha	8RCRA 13PPM TCLP / SPLP			9:30 2	9:20 1	9:10 9'	9:00 5	Time Sampled	Corrected Temperature:	Temperature Reading:	Factor:	ter ID:	Wet Ice:	the lab, if received by 4:30pm	TAT starts the day received by	Due Date:	Routine	Turn A	Email: g	0	A	0	В			festing	
	ıre)	irchase order from c ne any responsibility arge of \$5 for each s	CRA 13PPM Texas 11 AI TCLP / SPLP 6010: 8RCRA			20' Grab/	15' Grab/	Grab/	Grab/	Depth Grab/ t	0.2		0.0	JMOOH	No Par	ved by 4:30pm	day received by	5 Day TAT		Turn Around	Email: gmoreno@Ensolum.com.	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Hopps,	EL Paso	Housto	
2110011	te/Time	lient company to Eurofin y for any losses or expen ample submitted to Euro	Al Sb As Ba Be RA Sb As Ba Be			1 × ×	+	1 × ×	1 X X	Cont CHLOI TPH (8	8015)	)			.0)	rs			Pres.			Carlsbad, NM 88220	5315 Buena Vista Dr.	WPX	Jim Raley	MM (070) 392-7000, Ca	o, TX (915) 585-3443, L	n, TX (281) 240-4200, TX (432) 704-5440, Sai	Chain of Custody
● ▲ (C	Relinquished by: (	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn N Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag			×	×	×	×	BTEX	(802	1	00-4142 01011010	Chain of Chain of Ch						ANALYS	<u>lim.raley@dvn.com</u>	38220	sta Dr.			HODDS, NM (973) 392-7330, Calisbad, NM (373) 300-3133	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Custody
	(Signature)	ntractors. It assigns stan h losses are due to circum ese terms will be enforced	Fe Pb Mg Mn Mo Ni K Se n Mo Ni Se Ag TI U															1 1		IS REQUEST	Deliverables: EDD	Reporting: L	State of Project:	Program: U					
	Received by: (Signature)	stractors. It assigns standard terms and conditions losses are due to circumstances beyond the control se terms will be enforced unless previously negotiated	No         Ni         K         Se         Ag         SiO <sub>2</sub> Na         Sr           TI         U         Hg:         1631 / 245.         Hg         1631 / 245.         Hg         Hg         Hg         1631 / 245.         Hg         Hg										1					-					ject:	ST/PST   PRP Brow	Work Order Comments	www.xenco.com		Work Order No:	
Revised Date: 08/25/2020 Rev. 2020.2	ire) Date/Time		kg SiO₂ Na Sr Ti Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471			nAPP2231126594	Incident ID			Sample Comments	NaUH+Ascorbic Acid: SAPC	Zn Acetate+NaOH: Zn	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	NaHSO4: NABIS	H <sub>3</sub> PO <sub>4</sub> : HP	H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na	HCL: HC HNO3: HN	Cool: Cool MeOH: Me	None: NO DI Water: H <sub>2</sub> O	Preservative Codes	T Ll Other:		)	Program: UST/PST  PRP Brownfields RRC Superfund	Comments	Page of			



Job Number: 890-4149-1 SDG Number: 03A1987062

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 4149 List Number: 1 Creator: Stutzman, Amanda

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	

Job Number: 890-4149-1 SDG Number: 03A1987062

List Source: Eurofins Midland

List Creation: 02/22/23 08:24 AM

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 4149 List Number: 2 Creator: Kramer, Jessica

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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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5796 U.S. Hwy 64 Farmington, NM 87401

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





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**Practical Solutions for a Better Tomorrow** 

## **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E306080

Job Number: 01058-0007

Received: 6/9/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 6/15/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 6/15/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E306080 Date Received: 6/9/2023 6:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/9/2023 6:00:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

Field Offices:

Cell: 505-320-4759

ljarboe@envirotech-inc.com

Southern New Mexico Area Lynn Jarboe Technical Representative/Client Services Office: 505-421-LABS(5227)

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

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

Envirotech Web Address: www.envirotech-inc.com



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#### **Sample Summary**

		Sample Sum	illal y		
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	North Brushy PW 01058-0007 Gilbert Moreno	Line	<b>Reported:</b> 06/15/23 13:20
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH17 0.5'	E306080-01A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.
BH17 4'	E306080-02A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.
BH17 9'	E306080-03A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.
BH17 14'	E306080-04A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.
BH17 18'	E306080-05A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.
BH17 24'	E306080-06A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.
BH17 30'	E306080-07A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.



	0	ample D	ala			
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name Project Numl Project Mana	ber: 0103	h Brushy PW Lin 58-0007 ert Moreno	e		<b>Reported:</b> 6/15/2023 1:20:48PM
		BH17 0.5'				
		E306080-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analys	t: SL		Batch: 2323073
Benzene	ND	0.0250	1	06/09/23	06/13/23	
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23	
Toluene	ND	0.0250	1	06/09/23	06/13/23	
p-Xylene	ND	0.0250	1	06/09/23	06/13/23	
o,m-Xylene	ND	0.0500	1	06/09/23	06/13/23	
Fotal Xylenes	ND	0.0250	1	06/09/23	06/13/23	
Surrogate: 4-Bromochlorobenzene-PID		95.1 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analys	t: SL		Batch: 2323073
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		89.8 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analys	t: KM		Batch: 2323076
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/09/23	
Dil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/09/23	
Surrogate: n-Nonane		69.5 %	50-200	06/09/23	06/09/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analys	t: BA		Batch: 2324008
Chloride	3750	40.0	2	06/12/23	06/14/23	



	D		ata			
WPX Energy - Carlsbad 5315 Buena Vista Dr	Project Name Project Num		th Brushy PW Lir 58-0007	ne		Reported:
Carlsbad NM, 88220	Project Mana		ert Moreno	6/15/2023 1:20:48PN		
		BH17 4'				
		E306080-02				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analys	st: SL		Batch: 2323073
Benzene	ND	0.0250	1	06/09/23	06/13/23	
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23	
Toluene	ND	0.0250	1	06/09/23	06/13/23	
p-Xylene	ND	0.0250	1	06/09/23	06/13/23	
p,m-Xylene	ND	0.0500	1	06/09/23	06/13/23	
Fotal Xylenes	ND	0.0250	1	06/09/23	06/13/23	
Surrogate: 4-Bromochlorobenzene-PID		91.6 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analys	st: SL		Batch: 2323073
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		94.1 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analys	st: KM		Batch: 2323076
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/09/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/09/23	
Surrogate: n-Nonane		70.0 %	50-200	06/09/23	06/09/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analys	st: BA		Batch: 2324008
Chloride	ND	20.0	1	06/12/23	06/14/23	



	$\sim$	ampic D				
WPX Energy - Carlsbad	Project Name	: Nor	h Brushy PW Lin	e		
5315 Buena Vista Dr	Project Numb	er: 0103	58-0007			Reported:
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno		6/15/2023 1:20:48PM	
		BH17 9'				
		E306080-03				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analys	:: SL		Batch: 2323073
Benzene	ND	0.0250	1	06/09/23	06/13/23	
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23	
Toluene	ND	0.0250	1	06/09/23	06/13/23	
o-Xylene	ND	0.0250	1	06/09/23	06/13/23	
p,m-Xylene	ND	0.0500	1	06/09/23	06/13/23	
Total Xylenes	ND	0.0250	1	06/09/23	06/13/23	
Surrogate: 4-Bromochlorobenzene-PID		92.1 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analys	:: SL		Batch: 2323073
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		94.8 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analys	:: KM		Batch: 2323076
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/09/23	
Dil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/09/23	
Surrogate: n-Nonane		72.5 %	50-200	06/09/23	06/09/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analys	:: BA		Batch: 2324008
Chloride	92.0	20.0	1	06/12/23	06/14/23	



			uu			
WPX Energy - Carlsbad	Project Name:	Nor	th Brushy PW Lin	e		
5315 Buena Vista Dr	Project Numbe	er: 010	58-0007	Reported:		
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno		6/15/2023 1:20:48PM	
		BH17 14'				
		E306080-04				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analys	:: SL		Batch: 2323073
Benzene	ND	0.0250	1	06/09/23	06/13/23	
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23	
Toluene	ND	0.0250	1	06/09/23	06/13/23	
p-Xylene	ND	0.0250	1	06/09/23	06/13/23	
o,m-Xylene	ND	0.0500	1	06/09/23	06/13/23	
Fotal Xylenes	ND	0.0250	1	06/09/23	06/13/23	
Surrogate: 4-Bromochlorobenzene-PID		92.0 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analys	:: SL		Batch: 2323073
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		91.9 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analys	t: KM		Batch: 2323076
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/09/23	
Dil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/09/23	
Surrogate: n-Nonane		68.4 %	50-200	06/09/23	06/09/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analys	t: BA		Batch: 2324008
Chloride	3620	40.0	2	06/12/23	06/14/23	



		ampie D					
WPX Energy - Carlsbad 5315 Buena Vista Dr	Project Name: Project Numbe	er: 010	th Brushy PW Lin 58-0007	e		Reported:	
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno			6/15/2023 1:20:48PM	
		BH17 18'					
		E306080-05					
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst	: SL		Batch: 2323073	
Benzene	ND	0.0250	1	06/09/23	06/13/23		
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23		
Toluene	ND	0.0250	1	06/09/23	06/13/23		
p-Xylene	ND	0.0250	1	06/09/23	06/13/23		
o,m-Xylene	ND	0.0500	1	06/09/23	06/13/23		
Total Xylenes	ND	0.0250	1	06/09/23	06/13/23		
Surrogate: 4-Bromochlorobenzene-PID		91.4 %	70-130	06/09/23	06/13/23		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst	: SL		Batch: 2323073	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23		
Surrogate: 1-Chloro-4-fluorobenzene-FID		92.9 %	70-130	06/09/23	06/13/23		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst	: KM		Batch: 2323076	
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/09/23		
Oil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/09/23		
Surrogate: n-Nonane		69.0 %	50-200	06/09/23	06/09/23		
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst	: BA		Batch: 2324008	
Chloride	2880	40.0	2	06/12/23	06/14/23		



		ampie D				
WPX Energy - Carlsbad	Project Name	: Nor	th Brushy PW Lin	9		
5315 Buena Vista Dr	Project Numb	er: 010	58-0007		Reported:	
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno			6/15/2023 1:20:48PM
		BH17 24'				
		E306080-06				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst	: SL		Batch: 2323073
Benzene	ND	0.0250	1	06/09/23	06/13/23	
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23	
Toluene	ND	0.0250	1	06/09/23	06/13/23	
o-Xylene	ND	0.0250	1	06/09/23	06/13/23	
o,m-Xylene	ND	0.0500	1	06/09/23	06/13/23	
Fotal Xylenes	ND	0.0250	1	06/09/23	06/13/23	
Surrogate: 4-Bromochlorobenzene-PID		92.8 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst	: SL		Batch: 2323073
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		94.8 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst	: KM		Batch: 2323076
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/09/23	
Dil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/09/23	
Surrogate: n-Nonane		69.8 %	50-200	06/09/23	06/09/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst	: BA		Batch: 2324008
Chloride	3530	40.0	2	06/12/23	06/14/23	



		···I·				
WPX Energy - Carlsbad	Project Name	e: Nor	th Brushy PW Line	e		
5315 Buena Vista Dr	Project Num	ber: 010	58-0007		Reported:	
Carlsbad NM, 88220	Project Mana	iger: Gilb	ert Moreno	6/15/2023 1:20:48PM		
		BH17 30'				
		E306080-07				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst	: SL		Batch: 2323073
Benzene	ND	0.0250	1	06/09/23	06/13/23	
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23	
Toluene	ND	0.0250	1	06/09/23	06/13/23	
p-Xylene	ND	0.0250	1	06/09/23	06/13/23	
o,m-Xylene	ND	0.0500	1	06/09/23	06/13/23	
Total Xylenes	ND	0.0250	1	06/09/23	06/13/23	
Surrogate: 4-Bromochlorobenzene-PID		93.4 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst	: SL		Batch: 2323073
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		92.5 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst	: KM		Batch: 2323076
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/09/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/09/23	
Surrogate: n-Nonane		66.0 %	50-200	06/09/23	06/09/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst	: BA		Batch: 2324008
Chloride	4600	40.0	2	06/12/23	06/14/23	



## **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:	01	orth Brushy P 058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno					6/15/2023 1:20:48PM
		Volatile O	rganics b	oy EPA 802	21B				Analyst: SL
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2323073-BLK1)							Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Fotal Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	6.99		8.00		87.4	70-130			
LCS (2323073-BS1)							Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.58	0.0250	5.00		91.5	70-130			
Ethylbenzene	4.57	0.0250	5.00		91.3	70-130			
Toluene	4.71	0.0250	5.00		94.2	70-130			
p-Xylene	4.70	0.0250	5.00		93.9	70-130			
o,m-Xylene	9.25	0.0500	10.0		92.5	70-130			
Total Xylenes	13.9	0.0250	15.0		93.0	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.45		8.00		93.2	70-130			
Matrix Spike (2323073-MS1)				Source:	E306079-	01	Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.68	0.0250	5.00	ND	93.5	54-133			
Ethylbenzene	4.63	0.0250	5.00	ND	92.7	61-133			
Toluene	4.78	0.0250	5.00	ND	95.7	61-130			
p-Xylene	4.75	0.0250	5.00	ND	95.1	63-131			
o,m-Xylene	9.43	0.0500	10.0	ND	94.3	63-131			
Total Xylenes	14.2	0.0250	15.0	ND	94.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.41		8.00		92.7	70-130			
Matrix Spike Dup (2323073-MSD1)				Source:	E306079-	01	Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.99	0.0250	5.00	ND	99.7	54-133	6.42	20	
Ethylbenzene	4.95	0.0250	5.00	ND	99.1	61-133	6.67	20	
Toluene	5.10	0.0250	5.00	ND	102	61-130	6.42	20	
p-Xylene	5.07	0.0250	5.00	ND	101	63-131	6.49	20	
o,m-Xylene	10.1	0.0500	10.0	ND	101	63-131	6.65	20	
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## **QC Summary Data**

		$\mathbf{v} \mathbf{v} \mathbf{v}$		ary Data	•				
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		North Brushy PV 11058-0007	V Line				Reported:
Carlsbad NM, 88220		Project Manager:	(	Gilbert Moreno					6/15/2023 1:20:48PM
	Noi	nhalogenated C	Organics	by EPA 801	5D - Gl	RO			Analyst: SL
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2323073-BLK1)							Prepared: 0	6/08/23 A	analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.39		8.00		92.4	70-130			
LCS (2323073-BS2)							Prepared: 0	6/08/23 A	analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	47.4	20.0	50.0		94.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.41		8.00		92.7	70-130			
Matrix Spike (2323073-MS2)				Source: I	2306079-	01	Prepared: 0	6/08/23 A	analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	46.1	20.0	50.0	ND	92.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.43		8.00		92.9	70-130			
Matrix Spike Dup (2323073-MSD2)				Source: I	2306079-	01	Prepared: 0	6/08/23 A	analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	46.2	20.0	50.0	ND	92.4	70-130	0.213	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.54		8.00		94.3	70-130			



## **QC Summary Data**

		QU D	u 111111	ary Date	4				
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:	0	North Brushy P' 1058-0007	W Line				<b>Reported:</b> 6/15/2023 1:20:48PM
Carlsbad NM, 88220		Project Manager:	(	Gilbert Moreno					6/15/2023 1:20:48PM
	Nonha	alogenated Org	anics by	7 EPA 8015E	) - DRO	/ORO			Analyst: KM
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2323076-BLK1)							Prepared: 0	6/09/23 A1	nalyzed: 06/09/23
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	36.5		50.0		73.1	50-200			
LCS (2323076-BS1)							Prepared: 0	6/09/23 Ai	nalyzed: 06/09/23
Diesel Range Organics (C10-C28)	248	25.0	250		99.2	38-132			
Surrogate: n-Nonane	36.1		50.0		72.2	50-200			
Matrix Spike (2323076-MS1)				Source:	E306077-	04	Prepared: 0	6/09/23 Aı	nalyzed: 06/10/23
Diesel Range Organics (C10-C28)	6630	1250	250	6590	18.3	38-132			M4
Surrogate: n-Nonane	46.6		50.0		93.1	50-200			
Matrix Spike Dup (2323076-MSD1)				Source:	E306077-	04	Prepared: 0	6/09/23 A1	nalyzed: 06/10/23
Diesel Range Organics (C10-C28)	6020	1250	250	6590	NR	38-132	9.70	20	M4
Surrogate: n-Nonane	45.9		50.0		91.8	50-200			



## **QC Summary Data**

			-						
WPX Energy - Carlsbad		Project Name:	1	North Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:	(	01058-0007					•
Carlsbad NM, 88220		Project Manager	: (	Gilbert Moreno					6/15/2023 1:20:48PM
		Anions	by EPA	300.0/90564	4				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2324008-BLK1)							Prepared: 0	6/12/23	Analyzed: 06/14/23
Chloride	ND	20.0							
LCS (2324008-BS1)							Prepared: 0	6/12/23	Analyzed: 06/14/23
Chloride	267	20.0	250		107	90-110			
Matrix Spike (2324008-MS1)				Source:	E306078-	01	Prepared: 0	6/12/23	Analyzed: 06/14/23
Chloride	378	40.0	250	128	99.8	80-120			
Matrix Spike Dup (2324008-MSD1)				Source:	E306078-	01	Prepared: 0	6/12/23	Analyzed: 06/14/23
Chloride	408	40.0	250	128	112	80-120	7.53	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.



WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	06/15/23 13:20

M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.

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.

Reference Project Information

onente.	VPX Energ	y Permia	n, LLC.			Bill To		-		La	b Us	se On	ly				TA	T	EPA P	rogram
	North Bru					ion: Jim Raley		Lab	WO	#	-	Job				2D	3D	Standard	CWA	SDWA
	Manager:				Addre	ss: 5315 Buena Vista Dr.		E.	306	080		010	58	-0007				5 day TAT	1	1
	: 13000 W					tate, Zip: Carlsbad, NM, 8	8220					Analy	sis a	nd Meth	od					RCRA
City, Sta	te, Zip_Oc	lessa, TX,	79765		Phone	: 575-885-7502			μq			5.19				1.5			1.1.1.1	
Phone:	832-541-7	719			Email:	Email: jim.raley@dvn.com			ORO						10				State	
Email: [	evon-tear	n@etech	env.com		WBS/W	NO: MM-155117.AL.RNM			R0/(0	E	0		0.0		WN		~	NM CO	UT AZ	TX
Collecte	d by: Gilbe	ert More	no		Incide	nt ID: nAPP2231126594, nAPF	2312845934	1 🗊	IQ/C	802	8260	5010	5 300				Ŧ	×		
Time	Date	Matrix	No. of	Comple ID			Lab	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by	Metals 6010	Chloride 300.0		BGDOC		8		Remarks	
Sampled	Sampled	IVIALITX	Containers	Sample ID			Number	Dep	TPH 801	BTE	VOC	Met	Chic	TDS	BGI		GDOC		Remarks	
11:00	6.7.23	S	1			BH17	1	0.5'							х					
11:10	6.7.23	S	1			BH17	2	4'							x					
11:20	6.7.23	S	1		1	BH17	3	9'							x					
11:30	6.7.23	S	1			BH17	4	14'							x					
11:40	6.7.23	S	1			BH17	5	18'							x					
11:50	6.7.23	S	1		1	BH17	6	24'							x					
13:20	6.7.23	S	1		1	BH17	7	30'							x					
							-													
		1	la	no	/													1. 1		
		_	me-					-												
Additio	nal Instruc	tions:								-	-		-							
						at tampering with or intentionally	mislabelling the sa	imple l	ocatior	٦,	-	1.1.1.1.1.1.1			10 C 10 C			ceived on ice the day ess than 6 °C on subs		oled or
				d may be grounds for le		Sampled by: GM	1		1			receive	eu pack	eu mice at				100 C 100 C 100 C 100	equent days.	
elinquis	her by: (Sign	ature)	Date 6	. 8.23 08:	:00 1	eceived by: (Signature)	1 6-8-	23	08	300		Rece	eivec	on ice			se On I	ly		
	ned by: (Sign		Date	-823 17P	5 (	eceived by: (Signature)	Date 6-8-	-23	Time	83	0	T1			> T2	-		<u>T3</u>		
	hed by: (Sign		Date		DOR	ceived by: (Signature)	Date	23	Time	o: Or	-		Ten	np °C_	4					
ample M	trix: S - Soil. S	d - Solid, Sg	- Sludge, A -	Aqueous, O - Other	word -		Containe	er Typ	e:g-	glass.	_	_			nber g	lass, v	- VOA	4		
a second second se					unless other	r arrangements are made. Haz				_			_						he analysis	of the

### **Envirotech Analytical Laboratory**

#### Sample Receipt Checklist (SRC)

	WPX Energy - Carlsbad D	ate Received:	06/09/23 0	6:00	Work Order II	D: E306080
Phone:	(539) 573-4018 D	ate Logged In:	06/08/23 1	6:44	Logged In By	: Caitlin Mars
Email:	devon-team@ensolum.com D	ue Date:	06/15/23 1	7:00 (4 day TAT)		
<u>Chain of</u>	Custody (COC)					
1. Does tl	he sample ID match the COC?		No			
2. Does th	he number of samples per sampling site location match	the COC	Yes			
3. Were s	amples dropped off by client or carrier?		Yes	Carrier: <u>C</u>	ourier	
4. Was th	e COC complete, i.e., signatures, dates/times, requested	d analyses?	Yes			
5. Were a	Il samples received within holding time? Note: Analysis, such as pH which should be conducted in th i.e, 15 minute hold time, are not included in this disucssion.	e field,	Yes		Comm	ents/Resolution
Sample T	<u>Furn Around Time (TAT)</u>				a 1 t -	
6. Did the	e COC indicate standard TAT, or Expedited TAT?		Yes		Sample Jars were mi	
Sample (	<u>Cooler</u>				Gilbert verified that s	samples are BH17 .
	sample cooler received?		Yes			
-	was cooler received in good condition?		Yes			
). Was th	e 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 th	he sample received on ice? If yes, the recorded temp is 4°C, i.e Note: Thermal preservation is not required, if samples are re minutes of sampling	,	Yes			
13. If no <sup>.</sup>	visible ice, record the temperature. Actual sample ter	mperature: 4°	Ċ			
	Container	1				
_	queous VOC samples present?		No			
	OC samples collected in VOA Vials?		NA			
	head space less than 6-8 mm (pea sized or less)?		NA			
17. Was a	a trip blank (TB) included for VOC analyses?		NA			
18. Are n	on-VOC samples collected in the correct containers?		Yes			
19. Is the	appropriate volume/weight or number of sample container	s collected?	Yes			
Field Lab	<u>bel</u>					
	field sample labels filled out with the minimum inform	nation:				
	ample ID?		Yes			
	Date/Time Collected? Collectors name?		Yes	L		
	Preservation		Yes			
	the COC or field labels indicate the samples were press	erved?	No			
	ample(s) correctly preserved?	•	NA			
	filteration required and/or requested for dissolved meta	als?	No			
	ase Sample Matrix					
-	the sample have more than one phase, i.e., multiphase?	,	No			
	, does the COC specify which phase(s) is to be analyze		NA			
	ract Laboratory		- ** *			
Sabeoner						
	amples required to get sent to a subcontract laboratory?	)	No			

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



envirotech Inc.

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5796 U.S. Hwy 64 Farmington, NM 87401

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





# envirotech

**Practical Solutions for a Better Tomorrow** 

## **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E306081

Job Number: 01058-0007

Received: 6/9/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 6/15/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 6/15/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E306081 Date Received: 6/9/2023 6:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/9/2023 6:00:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

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Envirotech Web Address: www.envirotech-inc.com



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*		Sample Sum	mary		Ŭ
WPX Energy - Carlsbad		Project Name:	North Brushy PW L	line	Reported:
5315 Buena Vista Dr	5315 Buena Vista Dr		01058-0007		Reporteu:
Carlsbad NM, 88220	Carlsbad NM, 88220 Project Manager:		Gilbert Moreno		06/15/23 13:33
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH17 38'	E306081-01A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.



	D	ampic D	ata			
WPX Energy - Carlsbad 5315 Buena Vista Dr	Project Name Project Numl		th Brushy PW Li 58-0007	ne		Reported:
Carlsbad NM, 88220	Project Mana		ert Moreno			6/15/2023 1:33:45PN
		BH17 38'				
		E306081-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analy	st: SL		Batch: 2323073
Benzene	ND	0.0250	1	06/09/23	06/13/23	
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23	
Foluene	ND	0.0250	1	06/09/23	06/13/23	
p-Xylene	ND	0.0250	1	06/09/23	06/13/23	
o,m-Xylene	ND	0.0500	1	06/09/23	06/13/23	
Fotal Xylenes	ND	0.0250	1	06/09/23	06/13/23	
Surrogate: 4-Bromochlorobenzene-PID		94.2 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analy	st: SL		Batch: 2323073
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		91.9 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analy	st: KM		Batch: 2323076
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/10/23	
Dil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/10/23	
Surrogate: n-Nonane		70.9 %	50-200	06/09/23	06/10/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analy	st: BA		Batch: 2324007
Chloride	257	20.0	1	06/12/23	06/14/23	



## **QC Summary Data**

		<b>X</b> U V V		ny Dat					
WPX Energy - Carlsbad		Project Name:	N	orth Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:	01	1058-0007					
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno	•				6/15/2023 1:33:45PM
		by EPA 802	21B				Analyst: SL		
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2323073-BLK1)							Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	ND	0.0250					1		5
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
p-Xylene	ND	0.0250							
o,m-Xylene	ND	0.0500							
Fotal Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	6.99	0.0200	8.00		87.4	70-130			
LCS (2323073-BS1)							Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.58	0.0250	5.00		91.5	70-130			
Ethylbenzene	4.57	0.0250	5.00		91.3	70-130			
Toluene	4.71	0.0250	5.00		94.2	70-130			
p-Xylene	4.70	0.0250	5.00		93.9	70-130			
o,m-Xylene	9.25	0.0500	10.0		92.5	70-130			
Total Xylenes	13.9	0.0250	15.0		93.0	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.45		8.00		93.2	70-130			
Matrix Spike (2323073-MS1)				Source:	E306079-	01	Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.68	0.0250	5.00	ND	93.5	54-133			
Ethylbenzene	4.63	0.0250	5.00	ND	92.7	61-133			
Toluene	4.78	0.0250	5.00	ND	95.7	61-130			
o-Xylene	4.75	0.0250	5.00	ND	95.1	63-131			
o,m-Xylene	9.43	0.0500	10.0	ND	94.3	63-131			
Total Xylenes	14.2	0.0250	15.0	ND	94.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.41		8.00		92.7	70-130			
Matrix Spike Dup (2323073-MSD1)					E306079-		-		nalyzed: 06/12/23
Benzene	4.99	0.0250	5.00	ND	99.7	54-133	6.42	20	
Ethylbenzene	4.95	0.0250	5.00	ND	99.1	61-133	6.67	20	
Toluene	5.10	0.0250	5.00	ND	102	61-130	6.42	20	
p-Xylene	5.07	0.0250	5.00	ND	101	63-131	6.49	20	
•						62 121	6.65	20	
o,m-Xylene Fotal Xylenes	10.1 15.1	0.0500 0.0250	10.0 15.0	ND ND	101 101	63-131 63-131	6.60	20	



## **QC Summary Data**

		QU D	u 11111	ary Data	•							
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		North Brushy PV 1058-0007	V Line				Reported:			
Carlsbad NM, 88220		Project Manager:	C	Gilbert Moreno					6/15/2023 1:33:45PM			
	No	nhalogenated C	Organics	by EPA 801	5D - Gl	RO			Analyst: SL			
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit				
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes			
Blank (2323073-BLK1)							Prepared: 0	6/08/23 A	analyzed: 06/12/23			
Gasoline Range Organics (C6-C10)	ND	20.0										
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.39		8.00		92.4	70-130						
LCS (2323073-BS2)							Prepared: 0	6/08/23 A	analyzed: 06/12/23			
Gasoline Range Organics (C6-C10)	47.4	20.0	50.0		94.8	70-130						
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.41		8.00		92.7	70-130						
Matrix Spike (2323073-MS2)				Source: I	E <b>306079</b> -	01	Prepared: 0	6/08/23 A	analyzed: 06/12/23			
Gasoline Range Organics (C6-C10)	46.1	20.0	50.0	ND	92.3	70-130						
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.43		8.00		92.9	70-130						
Matrix Spike Dup (2323073-MSD2)				Source: I	E <b>306079</b> -	01	Prepared: 0	6/08/23 A	analyzed: 06/12/23			
Gasoline Range Organics (C6-C10)	46.2	20.0	50.0	ND	92.4	70-130	0.213	20				
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.54		8.00		94.3	70-130						



## **QC Summary Data**

		$\chi \cup \lambda$	~									
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		5	W Line				Reported:			
Carlsbad NM, 88220		Project Manager:	C	Gilbert Moreno					6/15/2023 1:33:45PM			
	Nonh	alogenated Org	anics by	EPA 8015I	) - DRO	/ORO			Analyst: KM			
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit				
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes			
Blank (2323076-BLK1)							Prepared: 0	6/09/23 Ai	nalyzed: 06/09/23			
Diesel Range Organics (C10-C28)	ND	25.0										
Oil Range Organics (C28-C36)	ND	50.0										
Surrogate: n-Nonane	36.5		50.0		73.1	50-200						
LCS (2323076-BS1)							Prepared: 0	6/09/23 Ai	nalyzed: 06/09/23			
Diesel Range Organics (C10-C28)	248	25.0	250		99.2	38-132						
Surrogate: n-Nonane	36.1		50.0		72.2	50-200						
Matrix Spike (2323076-MS1)				Source:	E306077-	04	Prepared: 0	Prepared: 06/09/23 Analyzed: 06/10/23				
Diesel Range Organics (C10-C28)	6630	1250	250	6590	18.3	38-132			M4			
Surrogate: n-Nonane	46.6		50.0		93.1	50-200						
Matrix Spike Dup (2323076-MSD1)				Result mg/kg         Rec %         Limit %         RPD         Limit limit %           mg/kg         %         %         %         %         %           Prepared:         06/09/23         A         %         %         %           73.1         50-200         Prepared:         06/09/23         A           99.2         38-132         72.2         50-200           Source:         E306077-04         Prepared:         06/09/23         A           6590         18.3         38-132         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4	nalyzed: 06/10/23							
Diesel Range Organics (C10-C28)	6020	1250	250	6590	NR	38-132	9.70	20	M4			
Surrogate: n-Nonane	45.9		50.0		91.8	50-200						



## **QC Summary Data**

		L L		v					
WPX Energy - Carlsbad		Project Name:	North Brushy PW Line						Reported:
5315 Buena Vista Dr		Project Number:	0	1058-0007		·			
Carlsbad NM, 88220		Project Manager	:: G	ilbert Moreno					6/15/2023 1:33:45PM
		Anions	by EPA	300.0/9056	4				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2324007-BLK1)							Prepared: 0	6/12/23 A	Analyzed: 06/14/23
Chloride	ND	20.0							
LCS (2324007-BS1)							Prepared: 0	6/12/23 A	Analyzed: 06/14/23
Chloride	263	20.0	250		105	90-110			
Matrix Spike (2324007-MS1)				Source:	E306057-	01	Prepared: 0	6/12/23 A	Analyzed: 06/14/23
Chloride	1680	20.0	250	1390	114	80-120			
Matrix Spike Dup (2324007-MSD1)				Source:	E306057-	01	Prepared: 0	6/12/23 A	Analyzed: 06/14/23
Chloride	1890	20.0	250	1390	198	80-120	11.8	20	M2

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.



_				
	WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
	5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
	Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	06/15/23 13:33

- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- 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.



Release

Received by OCD: 4/15/2024 2:04:17 PM

		y Permiar			Bill To			Lab Use Only							TAT					EPA Program	
		ishy PW L			Attention: Jim Raley		Lab	Lab WO# Job Nu E, 306081 905					ber		1D	2D	3D	Sta	andard	CWA	SDWA
		Gilbert M			Address: 5315 Buena Vista D		E-	304	20	81	0/05	58.	.000	7				5 d	lay TAT		
		County F	disc.		City, State, Zip: Carlsbad, NN	1, 88220							nd Met			_					RCRA
City, Sta	te, Zip_Oo	lessa, TX,	79765		Phone: 575-885-7502			þý													
Phone: 8	32-541-7	719			Email: jim.raley@dvn.com			ORO							-					State	
Email: D	evon-tear	n@eteche	env.com		WBS/WO: MM-155117.AL.RI	NM		0/0	-	1_		0			WN				NM CO	UT AZ	TX
Collecte	d by: Gilb	ert Morer	10		Incident ID: nAPP2231126594, n		1 -	J/DF	802	3260	010	300					¥		×		
Time	Date		No. of			Lab	th (ft	GRC	( py	by 8	als 6	ride			20		N				<u></u>
Sampled	Sampled	Matrix	Containers	Sample ID		Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TDS	-	BGDOC		GDOC			Remarks	
13:30	6.7.23	S	1		BH17	1	38'								x						
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Addition	al Instruc	tions:	-	<u> </u>				_	-							1		-			
duntion	ar motra.																				
					I am aware that tampering with or intention	ally mislabelling the sa	mple l	ocation	٦,		10. Sec. 2010								on ice the day n 6 °C on subs	they are samp equent days.	oled or
	ed by: (Sigr		Date	I may be grounds for Time	Received by: (Signature)	Date		Time	-	0						-	se On				
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Relinquish	ed by: (Sign	ature) 1.		-8:23 Time	S Received by: (Signature)	Date G-8	- 20														
Muc	ulle t	ingalo			IS UNINOW MUG	0 6-8	- 6	2/	82	0	<u>T1</u>	-		_ 1	<u>T2</u>				<u>T3</u>		
A	ed by: (Sigr	(M/CS)	b b		100 authana	~ /1/9/1	3	10	DE	7	AVG	Ten	np °C	4	4						
ample Ma	trix: S - Soil, S	V . V	2 10	Aqueous, O - Other		Containe	r Typ	e:g-	glass	, p - p	1			ambe	er gla	ass, v	- VOA	4			
					d unless other arrangements are made.											t exp	ense.	The r	eport for t	he analysis	of the
ibove san	ples is appl	icable only	to those sa	amples received by	the laboratory with this COC. The liability	ty of the laboratory	s limi	ted to	the a	moun	t paid f	for o	n the re	eport.							
### **Envirotech Analytical Laboratory**

Sample Receipt Checklist (SRC)

Client:	WPX Energy - Carlsbad	Date Received:	06/09/23 06	5:00	Work Order ID: E306081
Phone:	(539) 573-4018	Date Logged In:	06/08/23 16	6:46	Logged In By: Caitlin Mars
Email:		Due Date:	06/15/23 17	7:00 (4 day TAT)	
<u>Chain o</u>	<u>f Custody (COC)</u>				
1. Does 1	the sample ID match the COC?		Yes		
2. Does f	the number of samples per sampling site location mate	h the COC	Yes		
3. Were	samples dropped off by client or carrier?		Yes	Carrier: C	ourier
4. Was th	ne COC complete, i.e., signatures, dates/times, request	ed analyses?	Yes		
5. Were a	all samples received within holding time? Note: Analysis, such as pH which should be conducted in i.e, 15 minute hold time, are not included in this disucssion		Yes		Comments/Resolution
Sample	Turn Around Time (TAT)				
	e COC indicate standard TAT, or Expedited TAT?		Yes		Sample jars were mislabeled as BH13,
Sample	Cooler				Gilbert verified that samples are BH17.
	sample cooler received?		Yes		*
8. If yes,	was cooler received in good condition?		Yes		
9. Was tł	ne sample(s) received intact, i.e., not broken?		Yes		
10. Were	custody/security seals present?		No		
11. If ye	s, were custody/security seals intact?		NA		
12. Was t	he sample received on ice? If yes, the recorded temp is 4°C, i Note: Thermal preservation is not required, if samples are	<i>,</i>	Yes		
13. If no	minutes of sampling visible ice, record the temperature. Actual sample t		<u>°C</u>		
Sample	Container				
14. Are a	aqueous VOC samples present?		No		
15. Are 7	VOC samples collected in VOA Vials?		NA		
16. Is the	e 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 1	non-VOC samples collected in the correct containers?		Yes		
19. Is the	appropriate volume/weight or number of sample contained	ers collected?	Yes		
<u>Field La</u>					
	field sample labels filled out with the minimum infor	mation:	17		
	Sample ID? Date/Time Collected?		Yes		
	Collectors name?		Yes Yes		
	Preservation_		103		
	the COC or field labels indicate the samples were pre	eserved?	No		
	sample(s) correctly preserved?		NA		
	o filteration required and/or requested for dissolved me	etals?	No		
Multiph	ase Sample Matrix				
	the sample have more than one phase, i.e., multiphase	e?	No		
	s, does the COC specify which phase(s) is to be analyz		NA		
27. II yo					
•	ract Laboratory				
<u>Subcont</u>	ract Laboratory_ samples required to get sent to a subcontract laborator	y?	No		

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



•





5796 U.S. Hwy 64 Farmington, NM 87401

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





# envirotech

**Practical Solutions for a Better Tomorrow** 

# **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E306082

Job Number: 01058-0007

Received: 6/9/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 6/15/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 6/15/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E306082 Date Received: 6/9/2023 6:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/9/2023 6:00:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

Field Offices:

Cell: 505-320-4759

ljarboe@envirotech-inc.com

Southern New Mexico Area Lynn Jarboe Technical Representative/Client Services Office: 505-421-LABS(5227)

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

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

Envirotech Web Address: www.envirotech-inc.com



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Sample Summary											
WPX Energy - Carlsbad		Project Name:	North Brushy PW I	Line	Depented						
5315 Buena Vista Dr		Project Number:	01058-0007		Reported:						
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		06/15/23 13:32						
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container						
BH17 40'	E306082-01A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.						



	b		ala			
WPX Energy - Carlsbad 5315 Buena Vista Dr	Project Name Project Numb	ber: 010	th Brushy PW L 58-0007	ine		<b>Reported:</b> 6/15/2023 1:32:09PM
Carlsbad NM, 88220	Project Mana	ger: Gilb	ert Moreno			6/15/2023 1:32:09PM
		BH17 40'				
		E306082-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Anal	yst: SL		Batch: 2323073
Benzene	ND	0.0250	1	06/09/23	06/13/23	
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23	
Toluene	ND	0.0250	1	06/09/23	06/13/23	
o-Xylene	ND	0.0250	1	06/09/23	06/13/23	
o,m-Xylene	ND	0.0500	1	06/09/23	06/13/23	
Fotal Xylenes	ND	0.0250	1	06/09/23	06/13/23	
Surrogate: 4-Bromochlorobenzene-PID		94.0 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Anal	yst: SL		Batch: 2323073
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		92.5 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Anal	yst: KM		Batch: 2323076
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/10/23	
Dil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/10/23	
Surrogate: n-Nonane		74.2 %	50-200	06/09/23	06/10/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Anal	yst: BA		Batch: 2324007
Chloride	445	20.0	1	06/12/23	06/14/23	



# **QC Summary Data**

		QC D		ing Date					
WPX Energy - Carlsbad		Project Name:		orth Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:		1058-0007					
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno					6/15/2023 1:32:09PM
		Volatile O	rganics l	by EPA 802	21B				Analyst: SL
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2323073-BLK1)							Prepared: 0	6/08/23 A	nalyzed: 06/12/23
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	6.99	0.0250	8.00		87.4	70-130			
LCS (2323073-BS1)							Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.58	0.0250	5.00		91.5	70-130			
Ethylbenzene	4.57	0.0250	5.00		91.3	70-130			
Foluene	4.71	0.0250	5.00		94.2	70-130			
p-Xylene	4.70	0.0250	5.00		93.9	70-130			
p,m-Xylene	9.25	0.0500	10.0		92.5	70-130			
Total Xylenes	13.9	0.0250	15.0		93.0	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.45		8.00		93.2	70-130			
Matrix Spike (2323073-MS1)				Source:	E306079-(	01	Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.68	0.0250	5.00	ND	93.5	54-133			
Ethylbenzene	4.63	0.0250	5.00	ND	92.7	61-133			
Toluene	4.78	0.0250	5.00	ND	95.7	61-130			
p-Xylene	4.75	0.0250	5.00	ND	95.1	63-131			
p,m-Xylene	9.43	0.0500	10.0	ND	94.3	63-131			
Total Xylenes	14.2	0.0250	15.0	ND	94.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.41		8.00		92.7	70-130			
Matrix Spike Dup (2323073-MSD1)				Source:	E306079-	01	Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.99	0.0250	5.00	ND	99.7	54-133	6.42	20	
	1.05	0.0250	5.00	ND	99.1	61-133	6.67	20	
Ethylbenzene	4.95	0.0250							
-	5.10	0.0250	5.00	ND	102	61-130	6.42	20	
Ethylbenzene Toluene o-Xylene			5.00 5.00	ND ND	102 101	61-130 63-131	6.42 6.49	20	
Toluene	5.10 5.07 10.1	0.0250	5.00 10.0	ND ND	101 101	63-131 63-131	6.49 6.65	20 20	
Toluene o-Xylene	5.10 5.07	0.0250 0.0250	5.00	ND	101	63-131	6.49	20	



## **QC Summary Data**

		QU D	u	ary Data	•				
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		North Brushy PV )1058-0007	V Line				Reported:
Carlsbad NM, 88220		Project Manager:	(	Gilbert Moreno					6/15/2023 1:32:09PM
	Noi	nhalogenated C	Organics	s by EPA 801	5D - G	RO			Analyst: SL
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2323073-BLK1)							Prepared: 0	6/08/23 A	Analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.39		8.00		92.4	70-130			
LCS (2323073-BS2)							Prepared: 0	6/08/23 A	Analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	47.4	20.0	50.0		94.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.41		8.00		92.7	70-130			
Matrix Spike (2323073-MS2)				Source: I	E306079-	01	Prepared: 0	6/08/23 A	Analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	46.1	20.0	50.0	ND	92.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.43		8.00		92.9	70-130			
Matrix Spike Dup (2323073-MSD2)				Source: I	E <b>306079</b> -	01	Prepared: 0	6/08/23 A	Analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	46.2	20.0	50.0	ND	92.4	70-130	0.213	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.54		8.00		94.3	70-130			



## **QC Summary Data**

		QC D	u 111111	ary Data					
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	(	North Brushy PV 01058-0007 Gilbert Moreno	V Line				<b>Reported:</b> 6/15/2023 1:32:09PM
	Nonh	alogenated Org	anics by	y EPA 8015D	- DRO	/ORO			Analyst: KM
Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
Blank (2323076-BLK1)							Prepared: 0	6/09/23 A	nalyzed: 06/09/23
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0	50.0		72.1	50.200			
Surrogate: n-Nonane	36.5		50.0		73.1	50-200			
LCS (2323076-BS1)							Prepared: 0	6/09/23 A	analyzed: 06/09/23
Diesel Range Organics (C10-C28)	248	25.0	250		99.2	38-132			
Surrogate: n-Nonane	36.1		50.0		72.2	50-200			
Matrix Spike (2323076-MS1)				Source: <b>F</b>	2306077-	04	Prepared: 0	6/09/23 A	analyzed: 06/10/23
Diesel Range Organics (C10-C28)	6630	1250	250	6590	18.3	38-132			M4
Surrogate: n-Nonane	46.6		50.0		93.1	50-200			
Matrix Spike Dup (2323076-MSD1)				Source: F	2306077-	04	Prepared: 0	6/09/23 A	analyzed: 06/10/23
Diesel Range Organics (C10-C28)	6020	1250	250	6590	NR	38-132	9.70	20	M4
Surrogate: n-Nonane	45.9		50.0		91.8	50-200			



## **QC Summary Data**

		L L		J					
WPX Energy - Carlsbad		Project Name:	N	lorth Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:	0	1058-0007					
Carlsbad NM, 88220		Project Manager	: 6	ilbert Moreno					6/15/2023 1:32:09PM
		Anions	by EPA	300.0/9056	4				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2324007-BLK1)							Prepared: 0	6/12/23 A	analyzed: 06/14/23
Chloride	ND	20.0							
LCS (2324007-BS1)							Prepared: 0	6/12/23 A	analyzed: 06/14/23
Chloride	263	20.0	250		105	90-110			
Matrix Spike (2324007-MS1)				Source:	E306057-	01	Prepared: 0	6/12/23 A	analyzed: 06/14/23
Chloride	1680	20.0	250	1390	114	80-120			
Matrix Spike Dup (2324007-MSD1)				Source:	E306057-	01	Prepared: 0	6/12/23 A	analyzed: 06/14/23
Chloride	1890	20.0	250	1390	198	80-120	11.8	20	M2

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.



WP	X Energy - Carlsbad	Project Name:	North Brushy PW Line	
531	5 Buena Vista Dr	Project Number:	01058-0007	Reported:
Car	lsbad NM, 88220	Project Manager:	Gilbert Moreno	06/15/23 13:32

- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- 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.



Page 299 of 540

Reference Information

Client: W							Bill To						e Only					TA		EPA P	rogram
Project: N						ention: Jim Raley			Lab	WO#			Job N	umb	ber	10	) 2D	3D	Standard	CWA	SDWA
Project M						dress: 5315 Buen	Contrast for some time state of the		E3	2010	082		Clos	180	200-	/			5 day TAT		
Address:						y, State, Zip: Carl		0					Analysi	is an	d Meth	od					RCRA
City, State			79765		Pho	one: 575-885-750	02			þ			1								
hone: 83					Em	ail: jim.raley@dv	n.com			ORO										State	
mail: De	von-tean	n@etech	env.com	i		S/WO: MM-155				RO/C	-			0.0		VIN			NM CO	UT AZ	TX
Collected	by: Gilbe	ert Moren	10			ident ID: nAPP223		2845934	G	Id/c	802	8260	5010	300.0				¥	×		
Time	Date	Matrix	No. of	Sample ID				Lab	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride		DOUDA		N		Damad	
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13:40	6.7.23	S	1			BH17		1	40'						1	)					
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above sam	ples is appl	icable only	to those s	amples rece	ived by the labor	ratory with this COC	. The liability of the	laboratory i	s limite	ed to th	he am	nount	paid fo	or on	the rep	ort.		_			
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### **Envirotech Analytical Laboratory**

Sample Receipt Checklist (SRC)

lient:	WPX Energy - Carlsbad Da	ate Received:	06/09/23 06	5:00	Work Order ID: E306082
Phone:	(539) 573-4018 Da	ate Logged In:	06/08/23 16	5:48	Logged In By: Caitlin Mars
mail:	devon-team@ensolum.com Du	le Date:	06/15/23 17	7:00 (4 day TAT)	
Chain of	Custody (COC)				
. Does t	he sample ID match the COC?		Yes		
2. Does t	he number of samples per sampling site location match	the COC	Yes		
3. Were s	samples dropped off by client or carrier?		Yes	Carrier: C	Courier
4. Was th	e COC complete, i.e., signatures, dates/times, requested	l analyses?	Yes	_	
5. Were a	all samples received within holding time? Note: Analysis, such as pH which should be conducted in the i.e, 15 minute hold time, are not included in this disucssion.	e field,	Yes		Comments/Resolution
Sample 7	<u> Turn Around Time (TAT)</u>				
6. Did th	e COC indicate standard TAT, or Expedited TAT?		Yes		Sample jars were mislabeled as BH13,
Sample (	Cooler				Gilbert verified that samples are BH17.
7. Was a	sample cooler received?		Yes		
8. If yes,	was cooler received in good condition?		Yes		
9. Was th	he sample(s) received intact, i.e., not broken?		Yes		
10. Were	custody/security seals present?		No		
11. If yes	s, were custody/security seals intact?		NA		
12. Was th	he sample received on ice? If yes, the recorded temp is 4°C, i.e. Note: Thermal preservation is not required, if samples are rec		Yes		
	minutes of sampling		a		
3. If no	visible ice, record the temperature. Actual sample tem	nperature: $4^{\circ}$	<u>C</u>		
	<u>Container</u>				
	iqueous VOC samples present?		No		
	VOC samples collected in VOA Vials?		NA		
	e head space less than 6-8 mm (pea sized or less)?		NA		
	a trip blank (TB) included for VOC analyses?		NA		
	non-VOC samples collected in the correct containers? appropriate volume/weight or number of sample containers	a alla atad?	Yes Yes		
Field La		conceteu:	105		
	field sample labels filled out with the minimum inform	ation			
	Sample ID?	ution.	Yes		
	Date/Time Collected?		Yes	l	
C	Collectors name?		Yes		
_	Preservation				
	the COC or field labels indicate the samples were prese	rved?	No		
	ample(s) correctly preserved?		NA		
24. Is lab	o filteration required and/or requested for dissolved meta	ıls?	No		
	ase Sample Matrix				
	the sample have more than one phase, i.e., multiphase?		No		
27. If yes	s, does the COC specify which phase(s) is to be analyzed	d?	NA		
	ract Laboratory				
	amples required to get sent to a subcontract laboratory?		No		
00 117	a subcontract laboratory specified by the client and if so	who?	NA	Subcontract Lab	314



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5796 U.S. Hwy 64 Farmington, NM 87401

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





# envirotech

**Practical Solutions for a Better Tomorrow** 

# **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E306083

Job Number: 01058-0007

Received: 6/9/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 6/15/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 6/15/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E306083 Date Received: 6/9/2023 6:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/9/2023 6:00:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

Field Offices:

Southern New Mexico Area Lynn Jarboe Technical Representative/Client Services

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

Envirotech Web Address: www.envirotech-inc.com



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		Sample Sum	mary		
WPX Energy - Carlsbad		Project Name:	North Brushy PW L	line	Reported:
5315 Buena Vista Dr		Project Number:	01058-0007		Reporteu:
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		06/15/23 13:29
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH17 50'	E306083-01A	Soil	06/07/23	06/09/23	Glass Jar, 4 oz.



WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name Project Numl Project Mana	ber: 0103	th Brushy PW L 58-0007 ert Moreno	ine		<b>Reported:</b> 6/15/2023 1:29:20PM
		BH17 50'				
		E306083-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2323073
Benzene	ND	0.0250	1	06/09/23	06/13/23	
Ethylbenzene	ND	0.0250	1	06/09/23	06/13/23	
Toluene	ND	0.0250	1	06/09/23	06/13/23	
o-Xylene	ND	0.0250	1	06/09/23	06/13/23	
o,m-Xylene	ND	0.0500	1	06/09/23	06/13/23	
Total Xylenes	ND	0.0250	1	06/09/23	06/13/23	
urrogate: 4-Bromochlorobenzene-PID		92.8 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analy	yst: SL		Batch: 2323073
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/09/23	06/13/23	
urrogate: 1-Chloro-4-fluorobenzene-FID		94.8 %	70-130	06/09/23	06/13/23	
Nonhalogenated Organics by EPA 8015D - DRO/OR	0 mg/kg	mg/kg	Analy	yst: KM		Batch: 2323076
Diesel Range Organics (C10-C28)	ND	25.0	1	06/09/23	06/10/23	
Dil Range Organics (C28-C36)	ND	50.0	1	06/09/23	06/10/23	
urrogate: n-Nonane		72.7 %	50-200	06/09/23	06/10/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analy	yst: BA		Batch: 2324007
Chloride	35.9	20.0	1	06/12/23	06/14/23	



# **QC Summary Data**

		QC D		ing Duc	u				
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		orth Brushy P 1058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager:		ilbert Moreno					6/15/2023 1:29:20PM
		Volatile O	rganics l	by EPA 802	21B				Analyst: SL
Analyte	<b>D</b>	Reporting Limit	Spike	Source Result	D	Rec Limits	RPD	RPD Limit	
	Result mg/kg	mg/kg	Level mg/kg	mg/kg	Rec %	%	%	%	Notes
Blank (2323073-BLK1)							Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0230							
p,m-Aylene Total Xylenes	ND	0.0300							
Surrogate: 4-Bromochlorobenzene-PID	6.99	0.0250	8.00		87.4	70-130			
LCS (2323073-BS1)							Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.58	0.0250	5.00		91.5	70-130			
Ethylbenzene	4.57	0.0250	5.00		91.3	70-130			
Toluene	4.71	0.0250	5.00		94.2	70-130			
p-Xylene	4.70	0.0250	5.00		93.9	70-130			
p,m-Xylene	9.25	0.0500	10.0		92.5	70-130			
Total Xylenes	13.9	0.0250	15.0		93.0	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.45		8.00		93.2	70-130			
Matrix Spike (2323073-MS1)				Source:	E306079-(	01	Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.68	0.0250	5.00	ND	93.5	54-133			
Ethylbenzene	4.63	0.0250	5.00	ND	92.7	61-133			
Toluene	4.78	0.0250	5.00	ND	95.7	61-130			
o-Xylene	4.75	0.0250	5.00	ND	95.1	63-131			
p,m-Xylene	9.43	0.0500	10.0	ND	94.3	63-131			
Total Xylenes	14.2	0.0250	15.0	ND	94.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.41		8.00		92.7	70-130			
Matrix Spike Dup (2323073-MSD1)				Source:	E306079-	01	Prepared: 0	6/08/23 A	nalyzed: 06/12/23
Benzene	4.99	0.0250	5.00	ND	99.7	54-133	6.42	20	
Ethylbenzene	4.95	0.0250	5.00	ND	99.1	61-133	6.67	20	
T 1	5.10	0.0250	5.00	ND	102	61-130	6.42	20	
Toluene	5110					(2.121	6.49	20	
o-Xylene	5.07	0.0250	5.00	ND	101	63-131	0.49	20	
		0.0250 0.0500	5.00 10.0	ND ND	101 101	63-131 63-131	6.65	20 20	
o-Xylene	5.07								



## **QC Summary Data**

		QU D	u 111111	ary Data	L				
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:	0	North Brushy PV 1058-0007	V Line				Reported:
Carlsbad NM, 88220		Project Manager:	C	Gilbert Moreno					6/15/2023 1:29:20PM
	Noi	nhalogenated C	Organics	by EPA 801	5D - Gl	RO			Analyst: SL
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2323073-BLK1)							Prepared: 0	6/08/23 A	analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.39		8.00		92.4	70-130			
LCS (2323073-BS2)							Prepared: 0	6/08/23 A	analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	47.4	20.0	50.0		94.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.41		8.00		92.7	70-130			
Matrix Spike (2323073-MS2)				Source: I	E <b>306079</b> -	01	Prepared: 0	6/08/23 A	analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	46.1	20.0	50.0	ND	92.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.43		8.00		92.9	70-130			
Matrix Spike Dup (2323073-MSD2)				Source: I	E <b>306079</b> -	01	Prepared: 0	6/08/23 A	analyzed: 06/12/23
Gasoline Range Organics (C6-C10)	46.2	20.0	50.0	ND	92.4	70-130	0.213	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.54		8.00		94.3	70-130			

## **QC Summary Data**

		QU D	u 111111	ary Data	L				
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	C	North Brushy PV 11058-0007 Gilbert Moreno	W Line				<b>Reported:</b> 6/15/2023 1:29:20PM
	Nonh	alogenated Org		v EPA 8015D	- DRO	/ORO			Analyst: KM
Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
Blank (2323076-BLK1)							Prepared: 0	6/09/23 A	nalyzed: 06/09/23
Diesel Range Organics (C10-C28) Oil Range Organics (C28-C36)	ND ND	25.0 50.0							
Surrogate: n-Nonane	36.5		50.0		73.1	50-200			
LCS (2323076-BS1)							Prepared: 0	6/09/23 A	nalyzed: 06/09/23
Diesel Range Organics (C10-C28)	248	25.0	250		99.2	38-132			
Surrogate: n-Nonane	36.1		50.0		72.2	50-200			
Matrix Spike (2323076-MS1)				Source: I	E <b>306077</b> -	04	Prepared: 0	6/09/23 A	nalyzed: 06/10/23
Diesel Range Organics (C10-C28)	6630	1250	250	6590	18.3	38-132			M4
Surrogate: n-Nonane	46.6		50.0		93.1	50-200			
Matrix Spike Dup (2323076-MSD1)				Source: I	E <b>306077</b> -	04	Prepared: 0	6/09/23 A	nalyzed: 06/10/23
Diesel Range Organics (C10-C28)	6020	1250	250	6590	NR	38-132	9.70	20	M4
Surrogate: n-Nonane	45.9		50.0		91.8	50-200			



## **QC Summary Data**

			-							
WPX Energy - Carlsbad		Project Name:	]	North Brushy P	W Line				Repo	rted:
5315 Buena Vista Dr		Project Number:	(	01058-0007						
Carlsbad NM, 88220		Project Manager:	: (	Gilbert Moreno					6/15/2023	1:29:20PM
		Anions	by EPA	300.0/9056	4				Analyst:	BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit		
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Ν	lotes
Blank (2324007-BLK1)							Prepared: 0	6/12/23	Analyzed: 06	6/14/23
Chloride	ND	20.0								
LCS (2324007-BS1)							Prepared: 0	6/12/23	Analyzed: 06	6/14/23
Chloride	263	20.0	250		105	90-110				
Matrix Spike (2324007-MS1)				Source:	E306057-	01	Prepared: 0	6/12/23	Analyzed: 06	5/14/23
Chloride	1680	20.0	250	1390	114	80-120				
Matrix Spike Dup (2324007-MSD1)				Source:	E306057-	01	Prepared: 0	6/12/23	Analyzed: 06	5/14/23
Chloride	1890	20.0	250	1390	198	80-120	11.8	20		M2

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.



Γ	WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
	5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
	Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	06/15/23 13:29
	Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	

- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- 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.



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Release Project Information

Received by OCD: 4/15/2024 2:04:17 PM

Standard CWA SDWA 5 day TAT RCRA State NM CO UT AZ TX × NA Remarks
State NM CO UT AZ TX × V V
State NM CO UT AZ TX ×
NM CO UT AZ TX
NM CO UT AZ TX
NM CO UT AZ TX
×
Remarks
-
and an im the day they are constant as
ved on ice the day they are sampled or s than 6 °C on subsequent days.
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### **Envirotech Analytical Laboratory**

Sample Receipt Checklist (SRC)

Client:	WPX Energy - Carlsbad D	ate Received:	06/09/23 06	:00	Work Order ID:	E306083
Phone:	(539) 573-4018 D	ate Logged In:	06/08/23 16	:49	Logged In By:	Caitlin Mars
Email:	devon-team@ensolum.com D	ue Date:	06/15/23 17	:00 (4 day TAT)		
Chain o	f Custody (COC)					
	the sample ID match the COC?		Yes			
	the number of samples per sampling site location match	the COC	Yes			
	samples dropped off by client or carrier?		Yes	Carrier: (	ourier	
4. Was th	he COC complete, i.e., signatures, dates/times, requested	1 analyses?	Yes		<u></u>	
5. Were	all samples received within holding time? Note: Analysis, such as pH which should be conducted in th i.e, 15 minute hold time, are not included in this disucssion.	e field,	Yes		Comme	nts/Resolution
Sample	Turn Around Time (TAT)					
	e COC indicate standard TAT, or Expedited TAT?		Yes		Sample jars were misla	abeled as BH13,
Sample	Cooler				Gilbert verified that sa	mples are BH17
	sample cooler received?		Yes			
8. If yes,	, was cooler received in good condition?		Yes			
9. Was th	he sample(s) received intact, i.e., not broken?		Yes			
10. Were	e custody/security seals present?		No			
11. If ye	s, were custody/security seals intact?		NA			
12. Was t	he sample received on ice? If yes, the recorded temp is 4°C, i.e Note: Thermal preservation is not required, if samples are re		Yes			
12 Ifma	minutes of sampling		c			
	visible ice, record the temperature. Actual sample ter	inperature. <u>4</u>	<u>c</u>			
	Container_ aqueous VOC samples present?		No			
	VOC samples collected in VOA Vials?		NA			
	e head space less than 6-8 mm (pea sized or less)?		NA			
	a trip blank (TB) included for VOC analyses?		NA			
	non-VOC samples collected in the correct containers?		Yes			
	appropriate volume/weight or number of sample containers	s collected?	Yes			
Field La						
	e field sample labels filled out with the minimum inform	nation:				
	Sample ID?		Yes			
	Date/Time Collected?		Yes			
	Collectors name?		Yes			
	<b>Preservation</b> s the COC or field labels indicate the samples were press	erved?	No			
	sample(s) correctly preserved?		NO			
	b filteration required and/or requested for dissolved meta	als?	No			
	ase Sample Matrix		110			
	s the sample have more than one phase, i.e., multiphase?	,	No			
	s, does the COC specify which phase(s) is to be analyze		No NA			
•		·u.	INA			
	tract Laboratory	,	Na			
	samples required to get sent to a subcontract laboratory? a subcontract laboratory specified by the client and if so		No NA S	haantus at T -1	• NI A	
∠7. was	a subcontract laboratory specified by the chefit and if sc	wii0?	INA S	Subcontract Lal	: INA	

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



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5796 U.S. Hwy 64 Farmington, NM 87401

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





# envirotech

**Practical Solutions for a Better Tomorrow** 

# **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E307178

Job Number: 01058-0007

Received: 7/31/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 8/3/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 8/3/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E307178 Date Received: 7/31/2023 7:15:00AM

Gilbert Moreno,



Page 315 of 540

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/31/2023 7:15:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

Field Offices:

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#### Sample Summary

		Sample Sum	mary		
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	North Brushy PW 01058-0007 Gilbert Moreno	Line	<b>Reported:</b> 08/03/23 15:38
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH21 0.5'	E307178-01A	Soil	07/28/23	07/31/23	Glass Jar, 2 oz.
BH21 5'	E307178-02A	Soil	07/28/23	07/31/23	Glass Jar, 2 oz.
BH21 10'	E307178-03A	Soil	07/28/23	07/31/23	Glass Jar, 2 oz.
BH21 15'	E307178-04A	Soil	07/28/23	07/31/23	Glass Jar, 2 oz.
BH21 20'	E307178-05A	Soil	07/28/23	07/31/23	Glass Jar, 2 oz.
BH21 23'	E307178-06A	Soil	07/28/23	07/31/23	Glass Jar, 2 oz.
BH21 29'	E307178-07A	Soil	07/28/23	07/31/23	Glass Jar, 2 oz.
BH21 39'	E307178-08A	Soil	07/28/23	07/31/23	Glass Jar, 2 oz.



		mpic D				
WPX Energy - Carlsbad	Project Name:		th Brushy PW	/ Line		
5315 Buena Vista Dr	Project Numbe		58-0007			Reported:
Carlsbad NM, 88220	Project Manage	er: Gilb	ert Moreno			8/3/2023 3:38:44PM
		BH21 0.5'				
	]	E307178-01				
		Reporting				
Analyte	Result	Limit	Diluti	on Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	/kg Analyst: IY			Batch: 2331003
Benzene	ND	0.0250	1	07/31/23	07/31/23	
Ethylbenzene	ND	0.0250	1	07/31/23	07/31/23	
Toluene	ND	0.0250	1	07/31/23	07/31/23	
o-Xylene	ND	0.0250	1	07/31/23	07/31/23	
p,m-Xylene	ND	0.0500	1	07/31/23	07/31/23	
Total Xylenes	ND	0.0250	1	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		105 %	70-130	07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		95.9 %	70-130	07/31/23	07/31/23	
Surrogate: Toluene-d8		103 %	70-130	07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	А	nalyst: IY		Batch: 2331003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		105 %	70-130	07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		95.9 %	70-130	07/31/23	07/31/23	
Surrogate: Toluene-d8		103 %	70-130	07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	mg/kg Analyst: I			Batch: 2331016
Diesel Range Organics (C10-C28)	ND	25.0	1	07/31/23	08/03/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/31/23	08/03/23	
Surrogate: n-Nonane		85.0 %	50-200	07/31/23	08/03/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	А	nalyst: BA		Batch: 2331011
Chloride	4990	100	5	07/31/23	07/31/23	



		ampie D					
WPX Energy - Carlsbad	Project Name:		th Brushy P	W Line			D ( )
5315 Buena Vista Dr Carlsbad NM, 88220	Project Number: 01058-0007 Project Manager: Gilbert Moreno					<b>Reported:</b> 8/3/2023 3:38:44PM	
	T Tojeet Wianag	, Gilo	ent Moreno				0/0/2020 0.00.111 M
		BH21 5'					
		E307178-02					
		Reporting					
Analyte	Result	Limit	Dilu	tion	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: IY			Batch: 2331003
Benzene	ND	0.0250	1		07/31/23	07/31/23	
Ethylbenzene	ND	0.0250	1		07/31/23	07/31/23	
Toluene	ND	0.0250	1		07/31/23	07/31/23	
p-Xylene	ND	0.0250	1		07/31/23	07/31/23	
o,m-Xylene	ND	0.0500	1		07/31/23	07/31/23	
Total Xylenes	ND	0.0250	1		07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		105 %	70-130		07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		95.1 %	70-130		07/31/23	07/31/23	
Surrogate: Toluene-d8		104 %	70-130		07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: IY			Batch: 2331003
Gasoline Range Organics (C6-C10)	ND	20.0	1		07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		105 %	70-130		07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		95.1 %	70-130		07/31/23	07/31/23	
Surrogate: Toluene-d8		104 %	70-130		07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: KN	[		Batch: 2331016
Diesel Range Organics (C10-C28)	ND	25.0	1		07/31/23	08/03/23	
Dil Range Organics (C28-C36)	ND	50.0	1		07/31/23	08/03/23	
Surrogate: n-Nonane		91.5 %	50-200		07/31/23	08/03/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: BA			Batch: 2331011
Chloride	7360	200	10	0	07/31/23	07/31/23	



		ampic D					
WPX Energy - Carlsbad	Project Name:	: Nort	h Brushy P	W Line			
5315 Buena Vista Dr	Project Numb		01058-0007				Reported:
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno				8/3/2023 3:38:44PM
		BH21 10'					
		E307178-03					
		Reporting					
Analyte	Result	Limit	Dilu	tion 1	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: IY			Batch: 2331003
Benzene	ND	0.0250	1	L (	07/31/23	07/31/23	
Ethylbenzene	ND	0.0250	1	L (	07/31/23	07/31/23	
Toluene	ND	0.0250	1	L (	07/31/23	07/31/23	
p-Xylene	ND	0.0250	1	L (	07/31/23	07/31/23	
o,m-Xylene	ND	0.0500	1	L (	07/31/23	07/31/23	
Total Xylenes	ND	0.0250	1	1 0	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		109 %	70-130		07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		97.6 %	70-130		07/31/23	07/31/23	
Surrogate: Toluene-d8		102 %	70-130		07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: IY			Batch: 2331003
Gasoline Range Organics (C6-C10)	ND	20.0	1	L O	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		109 %	70-130		07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		97.6 %	70-130		07/31/23	07/31/23	
Surrogate: Toluene-d8		102 %	70-130		07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: KM			Batch: 2331016
Diesel Range Organics (C10-C28)	ND	25.0	1	L (	07/31/23	08/03/23	
Dil Range Organics (C28-C36)	ND	50.0	1	l I	07/31/23	08/03/23	
Surrogate: n-Nonane		83.9 %	50-200		07/31/23	08/03/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: BA			Batch: 2331011
Chloride	3360	40.0	2	2 (	07/31/23	07/31/23	



		ampic D					
WPX Energy - Carlsbad	Project Name:		h Brushy P	W Line			
5315 Buena Vista Dr	Project Numb		01058-0007				Reported:
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno				8/3/2023 3:38:44PM
		BH21 15'					
		E307178-04					
		Reporting					
Analyte	Result	Limit	Dilu	tion	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst: IY			Batch: 2331003
Benzene	ND	0.0250	1	. (	07/31/23	07/31/23	
Ethylbenzene	ND	0.0250	1		07/31/23	07/31/23	
Toluene	ND	0.0250	1	. (	07/31/23	07/31/23	
p-Xylene	ND	0.0250	1		07/31/23	07/31/23	
p,m-Xylene	ND	0.0500	1		07/31/23	07/31/23	
Total Xylenes	ND	0.0250	1		07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		105 %	70-130		07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		95.5 %	70-130		07/31/23	07/31/23	
Surrogate: Toluene-d8		102 %	70-130		07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: IY			Batch: 2331003
Gasoline Range Organics (C6-C10)	ND	20.0	1		07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		105 %	70-130		07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		95.5 %	70-130		07/31/23	07/31/23	
Surrogate: Toluene-d8		102 %	70-130		07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: KM			Batch: 2331016
Diesel Range Organics (C10-C28)	ND	25.0	1		07/31/23	08/03/23	
Dil Range Organics (C28-C36)	ND	50.0	1		07/31/23	08/03/23	
Surrogate: n-Nonane		93.2 %	50-200		07/31/23	08/03/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: BA			Batch: 2331011
Chloride	73.5	20.0	1	. (	07/31/23	07/31/23	



		ampic D				
WPX Energy - Carlsbad	Project Name		h Brushy PV	V Line		
5315 Buena Vista Dr	Project Numb		58-0007			Reported:
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno			8/3/2023 3:38:44PM
		BH21 20'				
		E307178-05				
		Reporting				
Analyte	Result	Limit	Diluti	on Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	А	nalyst: IY		Batch: 2331003
Benzene	ND	0.0250	1	07/31/23	07/31/23	
Ethylbenzene	ND	0.0250	1	07/31/23	07/31/23	
Toluene	ND	0.0250	1	07/31/23	07/31/23	
p-Xylene	ND	0.0250	1	07/31/23	07/31/23	
p,m-Xylene	ND	0.0500	1	07/31/23	07/31/23	
Total Xylenes	ND	0.0250	1	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		106 %	70-130	07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		96.7 %	70-130	07/31/23	07/31/23	
Surrogate: Toluene-d8		101 %	70-130	07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	А	Analyst: IY		Batch: 2331003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		106 %	70-130	07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		96.7 %	70-130	07/31/23	07/31/23	
Surrogate: Toluene-d8		101 %	70-130	07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	А	nalyst: KM		Batch: 2331016
Diesel Range Organics (C10-C28)	ND	25.0	1	07/31/23	08/03/23	
Dil Range Organics (C28-C36)	ND	50.0	1	07/31/23	08/03/23	
Surrogate: n-Nonane		94.2 %	50-200	07/31/23	08/03/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	А	nalyst: BA		Batch: 2331011
Chloride	261	20.0	1	07/31/23	07/31/23	



		impic D				
WPX Energy - Carlsbad	Project Name:		h Brushy PV	W Line		
5315 Buena Vista Dr	Project Numbe		58-0007			Reported:
Carlsbad NM, 88220	Project Manager: Gilbert Moreno					8/3/2023 3:38:44PM
		BH21 23'				
		E307178-06				
		Reporting				
Analyte	Result	Limit	Dilut	ion Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	A	analyst: IY		Batch: 2331003
Benzene	ND	0.0250	1	07/31/23	07/31/23	
Ethylbenzene	ND	0.0250	1	07/31/23	07/31/23	
Toluene	ND	0.0250	1	07/31/23	07/31/23	
p-Xylene	ND	0.0250	1	07/31/23	07/31/23	
o,m-Xylene	ND	0.0500	1	07/31/23	07/31/23	
Total Xylenes	ND	0.0250	1	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		105 %	70-130	07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		99.8 %	70-130	07/31/23	07/31/23	
Surrogate: Toluene-d8		101 %	70-130	07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Α	Analyst: IY		Batch: 2331003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		105 %	70-130	07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		99.8 %	70-130	07/31/23	07/31/23	
Surrogate: Toluene-d8		101 %	70-130	07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Α	analyst: KM		Batch: 2331016
Diesel Range Organics (C10-C28)	ND	25.0	1	07/31/23	08/03/23	
Dil Range Organics (C28-C36)	ND	50.0	1	07/31/23	08/03/23	
Surrogate: n-Nonane		99.5 %	50-200	07/31/23	08/03/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	A	analyst: BA		Batch: 2331011
Chloride	30.3	20.0	1	07/31/23	07/31/23	



		ampic D					
WPX Energy - Carlsbad	Project Name:		h Brushy P	W Line			
5315 Buena Vista Dr	Project Numb		01058-0007				Reported:
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno				8/3/2023 3:38:44PM
		BH21 29'					
		E307178-07					
		Reporting					
Analyte	Result	Limit	Dilu	tion	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	·	Analyst: IY			Batch: 2331003
Benzene	ND	0.0250	1	l	07/31/23	07/31/23	
Ethylbenzene	ND	0.0250	1	l	07/31/23	07/31/23	
Toluene	ND	0.0250	1	l	07/31/23	07/31/23	
p-Xylene	ND	0.0250	1	l	07/31/23	07/31/23	
p,m-Xylene	ND	0.0500	1	l	07/31/23	07/31/23	
Total Xylenes	ND	0.0250	1	l	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		108 %	70-130		07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		97.4 %	70-130		07/31/23	07/31/23	
Surrogate: Toluene-d8		101 %	70-130		07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: IY			Batch: 2331003
Gasoline Range Organics (C6-C10)	ND	20.0	1	l	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		108 %	70-130		07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		97.4 %	70-130		07/31/23	07/31/23	
Surrogate: Toluene-d8		101 %	70-130		07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: KM			Batch: 2331016
Diesel Range Organics (C10-C28)	ND	25.0	1	l	07/31/23	08/03/23	
Dil Range Organics (C28-C36)	ND	50.0	1	l	07/31/23	08/03/23	
Surrogate: n-Nonane		103 %	50-200		07/31/23	08/03/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: BA			Batch: 2331011
Chloride	28.3	20.0	1	l	07/31/23	07/31/23	


# Sample Data

		ampic D				
WPX Energy - Carlsbad	Project Name:		h Brushy PV	W Line		
5315 Buena Vista Dr	Project Numb		58-0007			Reported:
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno	8/3/2023 3:38:44PM		
		BH21 39'				
		E307178-08				
		Reporting				
Analyte	Result	Limit	Dilut	ion Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	ŀ	Analyst: IY		Batch: 2331003
Benzene	ND	0.0250	1	07/31/23	07/31/23	
Ethylbenzene	ND	0.0250	1	07/31/23	07/31/23	
Toluene	ND	0.0250	1	07/31/23	07/31/23	
p-Xylene	ND	0.0250	1	07/31/23	07/31/23	
o,m-Xylene	ND	0.0500	1	07/31/23	07/31/23	
Fotal Xylenes	ND	0.0250	1	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		106 %	70-130	07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		93.9 %	70-130	07/31/23	07/31/23	
Surrogate: Toluene-d8		103 %	70-130	07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	I	Analyst: IY		Batch: 2331003
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/31/23	07/31/23	
Surrogate: Bromofluorobenzene		106 %	70-130	07/31/23	07/31/23	
Surrogate: 1,2-Dichloroethane-d4		93.9 %	70-130	07/31/23	07/31/23	
Surrogate: Toluene-d8		103 %	70-130	07/31/23	07/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	I	Analyst: KM		Batch: 2331016
Diesel Range Organics (C10-C28)	ND	25.0	1	07/31/23	08/03/23	
Dil Range Organics (C28-C36)	ND	50.0	1	07/31/23	08/03/23	
Surrogate: n-Nonane		104 %	50-200	07/31/23	08/03/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	A	Analyst: BA		Batch: 2331011
Chloride	26.9	20.0	1	07/31/23	07/31/23	



# **QC Summary Data**

,	Project Name: Project Number: Project Manager:	01	orth Brushy PV 058-0007 lbert Moreno					Reported:
	Project Manager:							
		Gı	lbert Moreno				-	
r							8	/3/2023 3:38:44PM
	Volatile Organic	Compou	unds by EP	A 8260I	3			Analyst: IY
	Reporting	Spike	Source		Rec		RPD	
Result	Limit	Level	Result	Rec	Limits	RPD	Limit	
mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
						Prepared: 0'	7/31/23 Ana	lyzed: 07/31/23
ND	0.0250							
ND	0.0250							
ND	0.0250							
ND	0.0250							
ND								
ND								
		0.500		104	70-130			
0.520		0.500		104	70-130			
						Prenarad: 0'	7/31/23 1.00	lyzed: 07/31/22
						Prepared: 0	1131123 Ana	uyzeu: 07/31/23
	0.0250							
	0.0250							
5.37	0.0500	5.00		107	70-130			
8.09	0.0250	7.50		108	70-130			
0.527		0.500		105	70-130			
0.479		0.500		95.7	70-130			
0.522		0.500		104	70-130			
			Source:	E <b>307178-</b> (	07	Prepared: 0'	7/31/23 Ana	lyzed: 08/01/23
2.68	0.0250	2.50	ND	107	48-131			
2.57	0.0250	2.50	ND	103	45-135			
2.61	0.0250	2.50	ND	104	48-130			
2.82	0.0250	2.50	ND	113	43-135			
5.59	0.0500	5.00	ND	112	43-135			
8.41	0.0250	7.50	ND	112	43-135			
0.524		0.500		105	70-130			
0.485		0.500		96.9	70-130			
0.506		0.500		101	70-130			
			Source:	E307178-0	07	Prepared: 0'	7/31/23 Ana	lyzed: 08/01/23
2.68	0.0250	2.50	ND	107	48-131	0.243	23	
2.60	0.0250	2.50	ND	104	45-135	0.890	27	
2.70	0.0250	2.50	ND	108	48-130	3.47	24	
2.77		2.50	ND	111	43-135	1.75	27	
				110	43-135			
8.27	0.0250	7.50	ND	110	43-135	1.70	27	
		0.500		106	70-130			
		0.500		96.1	70-130			
-	ND       ND       ND       ND       ND       ND       0.519       0.476       0.520       2.60       2.51       2.61       2.71       5.37       8.09       0.522       2.68       2.57       2.68       2.57       2.61       2.82       5.59       8.41       0.524       0.506       2.68       2.60       2.70       2.71       5.50	ND     0.0250       0.519     0.476       0.520     0.519       0.476     0.520       2.60     0.0250       2.51     0.0250       2.61     0.0250       5.37     0.0500       8.09     0.0250       0.527     0.479       0.522     0.250       2.61     0.0250       2.57     0.0250       2.57     0.0250       2.61     0.0250       2.59     0.0500       8.41     0.0250       0.524     0.485       0.506     0.250       2.70     0.0250       2.70     0.0250       2.77     0.0250       2.77     0.0250       2.77     0.0250       2.70     0.0250  2.77     0.0250	ND     0.0250       0.519     0.500       0.520     0.500       0.520     2.50       2.60     0.0250     2.50       2.61     0.0250     2.50       2.71     0.0250     2.50       2.71     0.0250     7.50       0.527     0.500     5.00       0.522     0.500     0.500       0.522     0.500     2.50       2.61     0.0250     2.50       2.57     0.500     5.00       0.522     0.500     5.00       2.68     0.0250     2.50       2.59     0.500     5.00       0.524     0.500     0.500       0.506     0.500     0.500       2.68     0.0250     2.50       2.50     <	ND     0.0250       0.519     0.500       0.476     0.500       0.520     0.500       2.60     0.0250     2.50       2.61     0.0250     2.50       2.71     0.0250     2.50       5.37     0.0500     5.00       8.09     0.0250     7.50       0.522     0.500     0.500       0.522     0.500     0.500       0.522     0.500     0.500       0.522     0.500     ND       2.68     0.0250     2.50     ND       2.61     0.0250     2.50     ND       2.62     0.500     ND     0.524       0.524     0.500     0.500       0.524     0.500     0.500       0.524     0.500     <	ND     0.0250       0.519     0.500       0.520     0.500       0.520     0.500       0.520     0.500       0.520     0.500       2.60     0.0250       2.51     0.0250       2.61     0.0250       2.51     0.0250       2.51     0.0250       2.50     104       2.71     0.0250       0.527     0.500       0.527     0.500       0.527     0.500       0.522     0.500       0.522     0.500       2.57     0.0250       2.50     ND       2.51     0.0250       2.50     ND       0.522     0.500       0.522     0.500       104     2.57       0.525     2.50	ND     0.0250       ND     0.0250       ND     0.0250       ND     0.0250       ND     0.0250       ND     0.0500       ND     0.0250       0.519     0.500       0.519     0.500       0.476     0.500       0.520     0.500       104     70-130       0.520     0.500       104     70-130       2.60     0.0250     2.50       104     70-130       2.51     0.0250     2.50       100     70-130       2.61     0.0250     2.50       100     70-130       5.37     0.0500     5.00       103     70-130       0.527     0.500     105       0.522     0.500     95.7       0.500     95.7     70-130       0.522     0.500     104       2.68     0.0250     2.50     ND       2.68     0.0250     2.50     ND<	ND     0.0250       0.519     0.500       0.519     0.500       0.520     0.500       0.520     0.500       104     70-130       0.520     0.500       2.61     0.0250       2.61     0.0250       2.50     104       7.11     0.0250       2.50     109       0.527     0.500       0.527     0.500       0.527     0.500       0.522     0.500       0.522     0.500       0.522     0.500       0.520     2.50       0.522     0.500       0.522     0.500       0.523     0.500       104     70-130       2.55     ND     107       2.64	ND     0.0250     ND     0.0250       ND     0.0250



# **QC Summary Data**

		<b>V</b> 0.01		ing Dutt	-				
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	orth Brushy PV 1058-0007 ilbert Moreno	V Line				<b>Reported:</b> 8/3/2023 3:38:44PM
	No	onhalogenated O	rganics	by EPA 801	5D - GI	RO			Analyst: IY
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	t
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2331003-BLK1)							Prepared: 0	7/31/23	Analyzed: 07/31/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.519		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.476		0.500		95.2	70-130			
Surrogate: Toluene-d8	0.520		0.500		104	70-130			
LCS (2331003-BS2)							Prepared: 0	7/31/23	Analyzed: 08/01/23
Gasoline Range Organics (C6-C10)	64.0	20.0	50.0		128	70-130			
Surrogate: Bromofluorobenzene	0.529		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.464		0.500		92.8	70-130			
Surrogate: Toluene-d8	0.533		0.500		107	70-130			
Matrix Spike (2331003-MS2)				Source: H	E <b>307178-</b> (	07	Prepared: 0	7/31/23	Analyzed: 08/01/23
Gasoline Range Organics (C6-C10)	61.6	20.0	50.0	ND	123	70-130			
Surrogate: Bromofluorobenzene	0.517		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		97.0	70-130			
Surrogate: Toluene-d8	0.522		0.500		104	70-130			
Matrix Spike Dup (2331003-MSD2)				Source: I	E <b>307178-</b> (	07	Prepared: 0	7/31/23	Analyzed: 08/01/23
Gasoline Range Organics (C6-C10)	64.0	20.0	50.0	ND	128	70-130	3.87	20	
					101	50 120		-	
Surrogate: Bromofluorobenzene	0.530		0.500		106	70-130			
Surrogate: Bromofluorobenzene Surrogate: 1,2-Dichloroethane-d4	0.530 0.462		0.500 0.500		106 92.4	70-130 70-130			



# **QC Summary Data**

		$\chi \cup \gamma$	~~~~	ary Date	~				
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:	(	North Brushy P 01058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager:	(	Gilbert Moreno					8/3/2023 3:38:44PM
	Nonh	alogenated Org	anics by	y EPA 8015I	) - DRO	/ORO			Analyst: KM
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2331016-BLK1)							Prepared: 0	7/31/23 A	nalyzed: 08/02/23
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	50.8		50.0		102	50-200			
LCS (2331016-BS1)							Prepared: 0	7/31/23 A	analyzed: 08/02/23
Diesel Range Organics (C10-C28)	280	25.0	250		112	38-132			
Surrogate: n-Nonane	51.7		50.0		103	50-200			
Matrix Spike (2331016-MS1)				Source:	E307182-	03	Prepared: 0	7/31/23 A	analyzed: 08/02/23
Diesel Range Organics (C10-C28)	290	25.0	250	ND	116	38-132			
Surrogate: n-Nonane	47.1		50.0		94.3	50-200			
Matrix Spike Dup (2331016-MSD1)				Source:	E307182-	03	Prepared: 0	7/31/23 A	analyzed: 08/02/23
Diesel Range Organics (C10-C28)	278	25.0	250	ND	111	38-132	4.15	20	
Surrogate: n-Nonane	44.3		50.0		88.7	50-200			



# **QC Summary Data**

		•		v					
WPX Energy - Carlsbad		Project Name:	N	orth Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:	0	1058-0007					
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno					8/3/2023 3:38:44PM
		Anions	by EPA	300.0/9056 <i>A</i>	١				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2331011-BLK1)							Prepared: 0	7/31/23 A	nalyzed: 07/31/23
Chloride	ND	20.0							
LCS (2331011-BS1)							Prepared: 0	7/31/23 A	nalyzed: 07/31/23
Chloride	264	20.0	250		105	90-110			
Matrix Spike (2331011-MS1)				Source:	E307177-(	)1	Prepared: 0	7/31/23 A	nalyzed: 07/31/23
Chloride	358	200	250	ND	143	80-120			M5
Matrix Spike Dup (2331011-MSD1)				Source:	E307177-(	)1	Prepared: 0	7/31/23 A	nalyzed: 07/31/23
Chloride	282	200	250	ND	113	80-120	23.7	20	R2

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.



WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	08/03/23 15:38

M5 The analysis of the MS sample required a dilution such that the spike recovery calculation does not provide useful information. The accociated LCS spike recovery was acceptable.

R2 The RPD exceeded the acceptance limit.

- 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.



Reproject Information

Page	Recaived
gram SDWA	by OCD:
RCRA	
ТХ	4/15/2024 2
	2:04:17 F
	Me

	/PX Energy Pe		С.			Bill To				La		se On					T/	AT		EPA P	rogram
	North Brushy				4	Attention: Jim Raley		Lab	WO	ŧ	0	Job	Num	ber	1D	2D	3D	Sta	andard	CWA	SDWA
	Aanager: Gilbe					Address: 5315 Buena Vista Dr.		E.	30	17		010	58-	0007				50	day TAT		-
	13000 W Cou				(	City, State, Zip: Carlsbad, NM, 8	8220					Analy	sis a	nd Metho	d						RCRA
	e, Zip_Odessa		65		F	Phone: 575-885-7502			γd												
hone: (8	none: (832) 541-7719 Ema		mail: jim.raley@dvn.com			ORO	DKO					1					State				
mail: De	ail: Devon-team@etechenv.com		1	WBS: MM-155117.AL.RNM			RO/	51	0		0.0		MN		D 3D X V O O S S S S S S S S S S S S S		NM CO	UT AZ	TX		
ollected	d by: Edyte Ko	nan			1	ncident ID: nAPP2231126594/ r	APP2312845	t P	0/0	802	826	601(	30								
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID				Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0		BGDOC		GDOC			Remarks	
8:00	7/28/2023	S	1			BH21	1	0.5'							x						
8:10	7/28/2023	S	1			BH21	2	5'							x						
8:20	7/28/2023	S	1			BH21	3	10'							X						
8:30	7/28/2023	S	1			BH21	4	15'							x						
8:40	7/28/2023	S	1			BH21	5	20'							x				, i		
8:50	7/28/2023	S	1	BH21		10	23'							x							
9:00	7/28/2023	S	1			BH21	7	29'							x						-
9:10	7/28/2023	S	1			BH21	8	39'							x						
					H	- tit															
Addition	al Instruction	s:																			
	pler), attest to the of collection is cor		and the state of t			that tampering with or intentionally mislab Sampled by:	elling the sample l	ocation	n,		7			1					on ice the da an 6 °C on sub	1	
	ed by: (Signature		Date		Time 10:00	Received by: (Signature)	Date 7.28:	23	Time	000	1	Rece	eivec	l on ice:		ab Us		nly			
elinquish Micu	ed by: (Signature	rala		28:23	Time 700	Received by: (Signature)	Date 7.28		Time	73		T1			T2				<u>T3</u>		
Add	ed by: (Signature		Date <b>7</b> .	29.23	Time 2400	Begeived by: Bignature	- 7/31/2	3	Time 7	15	-	_	_	np°C	4						
	rix: S - Soil, Sd - So									_		_		c, ag - am	_						
ote: Sam	ples are discarde	d 30 days a	fter results	are reported	d unless oth	er arrangements are made. Hazardou	s samples will b	e retu	rned t	o clier	nt or d	dispose	ed of	at the clier	nt exp	ense.	The r	eport	for the ana	lysis of the	above

### **Envirotech Analytical Laboratory**

#### Sample Receipt Checklist (SRC)

Client:	WPX Energy - Carlsbad	Date Received:	07/31/23	07:15	Work Order ID:	E307178
Phone:	(539) 573-4018	Date Logged In:	07/28/23	15:54	Logged In By:	Caitlin Mars
Email:		Due Date:	08/04/23	17:00 (4 day TAT)		
Chain of	f Custody (COC)					
1. Does t	the sample ID match the COC?		Yes			
2. Does t	the number of samples per sampling site location mate	ch the COC	Yes			
3. Were s	samples dropped off by client or carrier?		Yes	Carrier: Courier		
4. Was th	ne COC complete, i.e., signatures, dates/times, request	ted analyses?	Yes			
5. Were a	all samples received within holding time? Note: Analysis, such as pH which should be conducted in i.e, 15 minute hold time, are not included in this disucssio		Yes		Commen	ts/Resolution
Sample '	<u>Turn Around Time (TAT)</u>					
6. Did th	e COC indicate standard TAT, or Expedited TAT?		Yes			
Sample	<u>Cooler</u>					
	sample cooler received?		Yes			
8. If yes,	was cooler received in good condition?		Yes			
9. Was th	ne sample(s) received intact, i.e., not broken?		Yes			
10. Were	e custody/security seals present?		No			
11. If yes	s, were custody/security seals intact?		NA			
12. Was t	he sample received on ice? If yes, the recorded temp is 4°C, i Note: Thermal preservation is not required, if samples are		Yes			
13 Ifno	minutes of sampling visible ice, record the temperature. Actual sample (	temperature: 1º	C			
		emperature. <u>4</u>	<u>c</u>			
	<u>Container</u>		Ν			
	aqueous VOC samples present? VOC samples collected in VOA Vials?		No NA			
	e head space less than 6-8 mm (pea sized or less)?		NA			
	a trip blank (TB) included for VOC analyses?		NA			
	non-VOC samples collected in the correct containers?		Yes Yes			
			105			
Field La	being the sample labels filled out with the minimum infor	mation				
	Sample ID?	Indulon.	Yes			
	Date/Time Collected?		Yes			
(	Collectors name?		Yes			
	Preservation					
	s the COC or field labels indicate the samples were pre-	eserved?	No			
	sample(s) correctly preserved?		NA			
24. Is lat	o filteration required and/or requested for dissolved me	etals?	No			
<u>Multiph</u>	ase Sample Matrix					
26. Does	the sample have more than one phase, i.e., multiphas	e?	No			
27. If yes	s, does the COC specify which phase(s) is to be analyz	zed?	NA			
~ •	ract Laboratory					
28. Are s	samples required to get sent to a subcontract laborator a subcontract laboratory specified by the client and if		No NA			

Date



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

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5796 U.S. Hwy 64 Farmington, NM 87401

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





# envirotech

**Practical Solutions for a Better Tomorrow** 

# **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E307179

Job Number: 01058-0007

Received: 7/31/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 8/4/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 8/4/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E307179 Date Received: 7/31/2023 7:15:00AM

Gilbert Moreno,



Page 334 of 540

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/31/2023 7:15:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

Field Offices:

**Southern New Mexico Area Lynn Jarboe** Technical Representative/Client Services

Office: 505-421-LABS(5227) Cell: 505-320-4759 ljarboe@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

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

Envirotech Web Address: www.envirotech-inc.com

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*		Sample Sum	mary		Ũ
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:	North Brushy PW L 01058-0007	Line	Reported:
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		08/04/23 15:24
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH21 18'	E307179-01A	Soil	07/28/23	07/31/23	Glass Jar, 2 oz.



	b	ampic D	ala			
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name Project Numb Project Mana	ber: 0105	th Brushy PV 58-0007 pert Moreno	V Line		<b>Reported:</b> 8/4/2023 3:24:02PM
		BH21 18'				
		E307179-01				
		Reporting				
Analyte	Result	Limit	Dilut	ion Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	A	nalyst: IY		Batch: 2331002
Benzene	ND	0.0250	1	07/31/23	08/01/23	
Ethylbenzene	ND	0.0250	1	07/31/23	08/01/23	
Foluene	ND	0.0250	1	07/31/23	08/01/23	
p-Xylene	ND	0.0250	1	07/31/23	08/01/23	
p,m-Xylene	ND	0.0500	1	07/31/23	08/01/23	
Total Xylenes	ND	0.0250	1	07/31/23	08/01/23	
Surrogate: 4-Bromochlorobenzene-PID		96.3 %	70-130	07/31/23	08/01/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	A	nalyst: IY		Batch: 2331002
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/31/23	08/01/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID		85.4 %	70-130	07/31/23	08/01/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Α	nalyst: KM		Batch: 2331016
Diesel Range Organics (C10-C28)	ND	25.0	1	07/31/23	08/03/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/31/23	08/03/23	
Surrogate: n-Nonane		97.5 %	50-200	07/31/23	08/03/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	A	nalyst: BA		Batch: 2331051
Chloride	2620	20.0	1	08/02/23	08/04/23	

# Sample Data



# **QC Summary Data**

WPX Energy - Carlsbad		Project Name:	N	orth Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:	01	058-0007					
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno					8/4/2023 3:24:02PM
		Volatile O	rganics b	oy EPA 802	21B				Analyst: IY
Analyte		Reporting	Spike	Source		Rec	DDD	RPD	
	Result mg/kg	Limit mg/kg	Level mg/kg	Result mg/kg	Rec %	Limits %	RPD %	Limit %	Notes
Blank (2331002-BLK1)							Prepared: 0	7/31/23 4	nalyzed: 07/31/23
	ND	0.0050					Trepared. 0	//J1/25 F	maryzed. 07731723
Benzene	ND	0.0250							
Ethylbenzene	ND ND	0.0250							
Toluene		0.0250							
o-Xylene	ND ND	0.0250							
p,m-Xylene	ND ND	0.0500							
Total Xylenes		0.0250	0.07						
Surrogate: 4-Bromochlorobenzene-PID	7.73		8.00		96.6	70-130			
LCS (2331002-BS1)							Prepared: 0	7/31/23 A	analyzed: 07/31/23
Benzene	5.19	0.0250	5.00		104	70-130			
Ethylbenzene	5.16	0.0250	5.00		103	70-130			
Toluene	5.23	0.0250	5.00		105	70-130			
p-Xylene	5.17	0.0250	5.00		103	70-130			
p,m-Xylene	10.5	0.0500	10.0		105	70-130			
Total Xylenes	15.7	0.0250	15.0		105	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.87		8.00		98.4	70-130			
Matrix Spike (2331002-MS1)				Source:	E307174-	02	Prepared: 0	7/31/23 A	analyzed: 07/31/23
Benzene	5.03	0.0250	5.00	ND	101	54-133			
Ethylbenzene	4.99	0.0250	5.00	ND	99.7	61-133			
Toluene	5.06	0.0250	5.00	ND	101	61-130			
o-Xylene	4.99	0.0250	5.00	ND	99.8	63-131			
p,m-Xylene	10.2	0.0500	10.0	ND	102	63-131			
Total Xylenes	15.1	0.0250	15.0	ND	101	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.79		8.00		97.4	70-130			
Matrix Spike Dup (2331002-MSD1)				Source:	E307174-	02	Prepared: 0	7/31/23 A	analyzed: 07/31/23
Benzene	4.94	0.0250	5.00	ND	98.7	54-133	1.82	20	
Ethylbenzene	4.91	0.0250	5.00	ND	98.2	61-133	1.54	20	
Toluene	4.98	0.0250	5.00	ND	99.5	61-130	1.55	20	
o-Xylene	4.93	0.0250	5.00	ND	98.5	63-131	1.32	20	
p,m-Xylene	10.0	0.0500	10.0	ND	100	63-131	1.31	20	
	14.9	0.0250	15.0	ND	99.7	63-131	1.32	20	
Total Xylenes	14.9	0.0250	15.0	ND	99./	03-131	1.32	20	



# **QC Summary Data**

		QC D	u111111	ii y Data	и				
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:	0	orth Brushy P 1058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno					8/4/2023 3:24:02PM
	Noi	nhalogenated C	Organics	by EPA 80	15D - GI	RO			Analyst: IY
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2331002-BLK1)							Prepared: 0	7/31/23 A	nalyzed: 07/31/23
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.48		8.00		93.5	70-130			
LCS (2331002-BS2)							Prepared: 0	7/31/23 A	nalyzed: 08/01/23
Gasoline Range Organics (C6-C10)	52.8	20.0	50.0		106	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.17		8.00		89.6	70-130			
Matrix Spike (2331002-MS2)				Source:	E307174-0	02	Prepared: 0	7/31/23 A	nalyzed: 07/31/23
Gasoline Range Organics (C6-C10)	54.7	20.0	50.0	ND	109	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.44		8.00		93.0	70-130			
Matrix Spike Dup (2331002-MSD2)				Source:	E307174-(	02	Prepared: 0	7/31/23 A	nalyzed: 07/31/23
Gasoline Range Organics (C6-C10)	55.1	20.0	50.0	ND	110	70-130	0.677	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.58		8.00		94.7	70-130			



# **QC Summary Data**

		QU D	u 111111	ary Data	L				
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	(	North Brushy PV 01058-0007 Gilbert Moreno	W Line				<b>Reported:</b> 8/4/2023 3:24:02PM
	Nonha	alogenated Org		y EPA 8015D	- DRO	/ORO			Analyst: KM
Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
Blank (2331016-BLK1)							Prepared: 0	7/31/23 A	analyzed: 08/02/23
Diesel Range Organics (C10-C28) Oil Range Organics (C28-C36)	ND ND	25.0 50.0							
Surrogate: n-Nonane	50.8		50.0		102	50-200			
LCS (2331016-BS1)							Prepared: 0	7/31/23 A	analyzed: 08/02/23
Diesel Range Organics (C10-C28)	280	25.0	250		112	38-132			
Surrogate: n-Nonane	51.7		50.0		103	50-200			
Matrix Spike (2331016-MS1)				Source: l	E <b>307182</b> -	03	Prepared: 0	7/31/23 A	analyzed: 08/02/23
Diesel Range Organics (C10-C28)	290	25.0	250	ND	116	38-132			
Surrogate: n-Nonane	47.1		50.0		94.3	50-200			
Matrix Spike Dup (2331016-MSD1)				Source: l	E <b>307182</b> -	03	Prepared: 0	7/31/23 A	analyzed: 08/02/23
Diesel Range Organics (C10-C28)	278	25.0	250	ND	111	38-132	4.15	20	
Surrogate: n-Nonane	44.3		50.0		88.7	50-200			



## **QC Summary Data**

			•	J –					
WPX Energy - Carlsbad		Project Name:	I	North Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:	. (	01058-0007					
Carlsbad NM, 88220		Project Manager		Gilbert Moreno					8/4/2023 3:24:02PM
		Anions	by EPA	300.0/9056	۱.				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2331051-BLK1)							Prepared: 0	8/02/23 A	nalyzed: 08/04/23
Chloride	ND	20.0							
LCS (2331051-BS1)							Prepared: 0	8/02/23 A	analyzed: 08/04/23
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2331051-MS1)				Source:	E307179-	01	Prepared: 0	8/02/23 A	analyzed: 08/04/23
Chloride	3030	20.0	250	2620	162	80-120			M2
Matrix Spike Dup (2331051-MSD1)				Source:	E307179-	01	Prepared: 0	8/02/23 A	analyzed: 08/04/23
Chloride	3250	20.0	250	2620	248	80-120	6.90	20	M2

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.



	Demitions		
WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	08/04/23 15:24

M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.

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.





Release

Client: W	/PX Energy Pe	rmian LLC	2.			Bill To				-	La	b Use	o On	lv	Cherrow .	1		TA	т	FPA P	rogram
	North Brushy					ention: Jim Raley			Lah	WO#				Vumbe	r	1D	2D		Standard	CWA	SDWA
	Aanager: Gilbe		10		Ad	dress: 5315 Buena Vista	Dr.		F	307	17			58-0					5 day TAT		
	13000 W Cou					y, State, Zip: Carlsbad, N		)	- Lon	20		A	naly	sis and	Metho	d		d			RCRA
City, Stat	te, Zip_Odessa	,TX, 7976	55			one: 575-885-7502				hd		T	Í		T	T					
Phone: (	832) 541-7719	1			Em	ail: jim.raley@dvn.com			1	ORO										State	
mail: D	evon-team@e	techenv.	com			3S: MM-155117.AL.RNM			1	RO/G	-			0.0		WN		~	NM CO	UT AZ	TX
Collected	d by: Edyte Ko	nan			Inc	ident ID: nAPP22311265	94/ nAPP	2312845	t.)	o/bi	802	826	6010	= 30(				¥	10.21 (12)		
Time	Date Sampled	Matrix	No. of	Sample ID		and the second second		Lab	Depth(ft.)	5 5	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0		BGDOC		GDOC		Remarks	
Sampled	Date Sampled	WINGTIN	Containers	Sample ID				Number	Dep	TPH GRO/DRO/ORO by 8015	BTE	VO	Me	CPT		BG		GD		Remarks	
8:35	7/28/2023	S	1			BH21		1	18'							X					Page rogram SDWA RCRA TX
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/																					
Addition	al Instruction	s:																			
(field sam	pler), attest to the	validity and a	authenticity	of this sample.	am aware tha	at tampering with or intentionally	mislabelling	the sample l	ocation	1,		5	Sample	s requiring	thermal	preserva	ation mu	ust be rea	ceived on ice the da	y they are sam	pled or
late or time	e of collection is co	nsidered frau	id and may b	pe grounds for le	gal action.	Sampled by:						r	receive	d packed i	n ice at ar	n avg ten	np abov	e 0 but le	ess than 6 °C on sub	sequent days.	
Relinquish	ed by: (Signature	)	Date 07/2	a la companya da la c	ne 0:00	Received by: (Signature)	nycles	Date		Time	200	5	Rece	ived o	n ice:		ab Us	e Onl	У		
	ed by: (Signature	) 	Date		me	Received by: (Signature)	d	Date 7.29		Time		-		iveu o		0					
<b>M</b> Cl Relinguish	ed by: (Signature	1 jells	Date	278-23	700 me	Regived by:/Signature)	Jø.	Dater /	ω w	Time	73	0	<u>T1</u>			T2			<u></u> <u>T3</u>		
	Rew N.	NSE			2400	Caitle Me	An	7/3/2	3	7.	15			Temp		T	-	-			
iample Mat	trix: S - Soil, Sd - So	lid, Sg - Slud	ge, A - Aque	ous, O - Other		and the second second second		Containe	r Type	e:g-g	glass,	p - pc	oly/p	lastic, a	g - am	ber gla	ass, v	- VOA			

Instructions: Please take note of any NO checkmarks.

### **Envirotech Analytical Laboratory**

#### Sample Receipt Checklist (SRC)

Client:	WPX Energy - Carlsbad	Date Received:	07/31/23 03	7:15	Work Order ID:	E307179
Phone:	(539) 573-4018	Date Logged In:	07/28/23 15	5:55	Logged In By:	Caitlin Mars
Email:	devon-team@ensolum.com	Due Date:	08/04/23 1	7:00 (4 day TAT)		
Chain of	f Custody (COC)					
1. Does t	the sample ID match the COC?		Yes			
	the number of samples per sampling site location match	the COC	Yes			
3. Were a	samples dropped off by client or carrier?		Yes	Carrier: Courier		
4. Was th	he COC complete, i.e., signatures, dates/times, requeste	d analyses?	Yes			
5. Were a	all samples received within holding time? Note: Analysis, such as pH which should be conducted in th i.e, 15 minute hold time, are not included in this disucssion.	-	Yes		Commen	ts/Resolution
Sample'	Turn Around Time (TAT)					
	ne COC indicate standard TAT, or Expedited TAT?		Yes			
Sample	•					
	sample cooler received?		Yes			
	, was cooler received in good condition?		Yes			
-	he sample(s) received intact, i.e., not broken?		Yes			
	e custody/security seals present?		No			
	s, were custody/security seals intact?		NA			
	the sample received on ice? If yes, the recorded temp is 4°C, i.e. Note: Thermal preservation is not required, if samples are r minutes of sampling visible ice, record the temperature. Actual sample te	eceived w/i 15	Yes			
	Container		-			
	aqueous VOC samples present?		No			
	VOC samples collected in VOA Vials?		NA			
	e head space less than 6-8 mm (pea sized or less)?		NA			
	a trip blank (TB) included for VOC analyses?		NA			
	non-VOC samples collected in the correct containers?		Yes			
19. Is the	appropriate volume/weight or number of sample container	rs collected?	Yes			
Field La	<u>ıbel</u>					
20. Were	e field sample labels filled out with the minimum inform	nation:				
	Sample ID?		Yes			
	Date/Time Collected? Collectors name?		Yes			
	Preservation		Yes			
	s the COC or field labels indicate the samples were pres	erved?	No			
	sample(s) correctly preserved?		NA			
	b filteration required and/or requested for dissolved met	tals?	No			
	ase Sample Matrix					
	s the sample have more than one phase, i.e., multiphase	?	No			
	s, does the COC specify which phase(s) is to be analyze		NA			
Subcont	tract Laboratory					
28. Are s	samples required to get sent to a subcontract laboratory	?	No			
29. Was	a subcontract laboratory specified by the client and if s	o who?	NA	Subcontract Lab: NA		
	Instruction					

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



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**Practical Solutions for a Better Tomorrow** 

# **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E306064

Job Number: 01058-0007

Received: 6/8/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 6/14/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 6/14/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E306064 Date Received: 6/8/2023 8:30:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/8/2023 8:30:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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.

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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

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

Envirotech Web Address: www.envirotech-inc.com



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Chain of Custody etc.	9

		Sample Sum	mary		
WPX Energy - Carlsbad		Project Name:	North Brushy PW I	Line	Reported:
5315 Buena Vista Dr		Project Number:	01058-0007		Reporteu:
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		06/14/23 14:55
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH13	E306064-01A	Aqueous	06/06/23	06/08/23	Poly 500mL
	E306064-01B	Aqueous	06/06/23	06/08/23	Poly 500mL

C

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	Sam	pie Da	la			
WPX Energy - Carlsbad	Project Name:	North	Brushy PW Line	2		
5315 Buena Vista Dr	Project Number:	01058-	-0007			Reported:
Carlsbad NM, 88220	Project Manager:	Gilber	t Moreno			6/14/2023 2:55:02PM
	B	H13				
	E306	064-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analyst	: RAS		Batch: 2324009
Total Dissolved Solids	61500	50.0	1	06/12/23	06/13/23	
Anions by EPA 300.0/9056A	mg/L	mg/L	Analyst	: BA		Batch: 2324014
Chloride	46600	2000	1000	06/12/23	06/13/23	

## **Sample Data**



# **QC Summary Data**

		•		v					
WPX Energy - Carlsbad		Project Name:		North Brushy P	W Line				Reported:
5315 Buena Vista Dr Carlsbad NM, 88220		Project Number Project Manager		1058-0007 Jilbert Moreno					6/14/2023 2:55:02PM
Carisbau NM, 88220		Floject Manager							0/14/2023 2.33.021 14
		Wet Chem/	Gravimet	tric by SM2	2540C				Analyst: RAS
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2324009-BLK1)							Prepared: 0	6/12/23 A	nalyzed: 06/14/23
Total Dissolved Solids	ND	10.0							
LCS (2324009-BS1)							Prepared: 0	6/12/23 A	nalyzed: 06/14/23
Total Dissolved Solids	101	10.0	100		101	55-134			
Duplicate (2324009-DUP1)				Source:	E306064-	01	Prepared: 0	6/12/23 A	nalyzed: 06/13/23
Total Dissolved Solids	62900	50.0		61500			2.25	5	



## **QC Summary Data**

				v					
WPX Energy - Carlsbad		Project Name:		orth Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number	: 0	1058-0007					
Carlsbad NM, 88220		Project Manager: Gilbert Moreno							6/14/2023 2:55:02PM
		Anions	by EPA 3	300.0/9056 <i>A</i>	4				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2324014-BLK1)							Prepared: 0	6/12/23	Analyzed: 06/13/23
Chloride	ND	2.00							
LCS (2324014-BS1)							Prepared: 0	6/12/23	Analyzed: 06/13/23
Chloride	25.3	2.00	25.0		101	90-110			
LCS Dup (2324014-BSD1)							Prepared: 0	6/12/23	Analyzed: 06/13/23
Chloride	25.5	2.00	25.0		102	90-110	0.846	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.



WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	06/14/23 14:55

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.



Release

Received by OCD: 4/15/2024 2:04:17 PM

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Client: WPX Energy Permian, LLC.				Bill To						Use Only				TAT				EPA P	rogram		
	North Bru					ention: Jim Raley		Lab	WO	¥		Job N	um	ber	1[	2 2	D 3	10000	Standard	CWA	SDWA
	Aanager:					dress: 5315 Buena Vista Dr.		E	301	QOL	24	dos	1-8	Tat					5 day TAT		
	13000 W					y, State, Zip: Carlsbad, NM, 8	8220							nd Meth	od						RCRA
City, Stat	te, Zip_Od	lessa,TX,	79765		Ph	one: 575-885-7502			h	10000										1.4.4	1
Phone: 8	32-541-7	719			Em	ail: jim.raley@dvn.com			ORO											State	
Email: D	evon-tean	n@etech	env.com			WBS/WO: MM-155117.AL.RNM			%0/0	-		1	0		2				NM CO	UT AZ	TX
Collected	d by: Gilbe	ert Morei	no			ident ID:	120	-	DPF	802	3260	010	300		P.5		1	ř	×		
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	TDS	CDOC	DODOO		GDOC		Remarks	
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8:45	6.6.23	A	1			BH13	2							x							
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Cup	ed by: (Sign:		-	7.23	Time 07:30	Received by: (Signature)		17		130	)	Receiv	ved	on ice:	6	Lab V)/	Use / N	Only	/		
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ample Mat	rix: S - Soil, Se	d - Solid, Sg	- Sludge, A -	Aqueous, O - (	Other		Containe	r Typ	e:g-	glass	p)p	oly/pla	stic	, ag - an	nber	glass	s, v - 1	VOA			
						other arrangements are made. Ha	zardous samples	will b	e retu	rned t	o clier	nt or dis	pos	ed of at t	the cli	ient e	expens	se. T	he report for t	he analysis	of the
						ratory with this COC. The liability o	and the second														

Reproject Information

Received by OCD: 4/15/2024 2:04:17 PM

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Client	WPX E	Energy	y Permia	n, LLC.				Bill To			1210	La	ab Us	e Or	ly	1			1	TA	AT	EPA P	rogram
			shy PW I		in the second second		Atte	ention: Jim Raley		Lab	WO#	-		Job	Num			1D	2D	3D	Standard	CWA	SDWA
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Addre	ss: 130	000 W	County	Rd 100	C. I.	-	City	, State, Zip: Carlsbad, NM, 8	8220		~ -					nd Me							RCRA
City, S	tate, Zi	ip Od	essa,TX,	79765				ne: 575-885-7502			à												
Phone	: 832-5	541-77	719			1		ail: jim.raley@dvn.com			RO					2						State	
mail	Devon	n-team	n@etech	env.com				S/WO: MM-155117.AL.RNM			0/0				0	1		WN			NM CO	UTAZ	TX
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Time		ate		No. of					Lab	h(ft	GRC	by	by 8	als 6	ride			OC		v			
Sampl		mpled	Matrix	Containers	Sample I	D			Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX	VOC by 8260	Metals 6010	Chloride	TDS		BGDOC		GDOC		Remarks	- Ta
8:45	6.6	6.23	А	21				BH13	1						x	X					Gilb	ort	
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Additi	onal In:	struct	tions:					No. of the second second	- Inde														
								e that tampering with or intentionally n	nislabelling the san	nple lo	cation,			Concern Street		111 A. 1997					ceived on ice the day ess than 6 °C on subs	and the second second second	led or
	-				may be grou	1	legal action							receive	u pack	eu in ice i	arana	-	-	_		equent days,	
E		ED		The second se	7.23	Time 07	1:30	Received by: (Signature) MCUULU (Umals	- 6-70	-	Time 7	30		Rece	eived	on ic	e:		)/ N	e On	ly		1
Relinqu	ished by:	I (Signa	mure)	Date	723	Time 16	,30	Received by: (Signature)	Date 6-7-	23	Time 17	30	2	<u>T1</u>				T2			T3		
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Sample	Matrix: S -	- Soil, Sd	- Solid, Sg	- Sludge, A -	Aqueous, O	Other		Charles	Container	Туре	:g-g	lass	-		and the second		ambe	er gla	iss, v	- VOA	4		
A DESCRIPTION OF THE OWNER OWNER OF THE OWNER OF								her arrangements are made. Haza atory with this COC. The liability of	ardous samples v	vill be	retur	ned to	o clier	nt or c	lispos	ed of a	t the	client				ne analysis	of the
100183	unpies is	appile	able only	to those sa	inples lete	veu by	the labora	atory with this coc. The hability of	the laboratory is	innit		are at	nount	paid		- the re	.port.	-		-			
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NECEIVE	ed by OCD: 4/15/2024 2:04:17 PM E1	nvirotech	Analytic	al Laborato	rv		Page 355 of 5 Printed: 6/8/2023 1:11:22PM
			v	ecklist (SRC)	- J		
Instructio	ns: Please take note of any NO checkmarks.	Sample	Receipt Ch	eekiist (SKC)			
If we recei	ve no response concerning these items within 24 hours of the	date of this not	ice, all the san	ples will be analyze	ed as requested.		
Client:	WPX Energy - Carlsbad Da	ate Received:	06/08/23 08:	30	,	Work Order ID:	E306064
Phone:	(539) 573-4018 Da	ate Logged In:	06/08/23 08:	36	]	Logged In By:	Caitlin Mars
Email:		ue Date:	06/14/23 17:	00 (4 day TAT)		,	
Chain	of Custody (COC)						
1. Doe	s the sample ID match the COC?		Yes				
	s the number of samples per sampling site location match	the COC	No				
3. Wer	e samples dropped off by client or carrier?		Yes	Carrier: Cour	ier		
	the COC complete, i.e., signatures, dates/times, requested	l analyses?	Yes	Curren: <u>Cour</u>			
	e all samples received within holding time?	·	Yes				
	Note: Analysis, such as pH which should be conducted in the i.e, 15 minute hold time, are not included in this disucssion.	e field,				Commen	ts/Resolution
<u>Sampl</u>	<u>e Turn Around Time (TAT)</u>						
6. Did	the COC indicate standard TAT, or Expedited TAT?		Yes				
<u>Sampl</u>	e Cooler_						
7. Was	a sample cooler received?		Yes				
8. If ye	es, was cooler received in good condition?		Yes				
9. Was	the sample(s) received intact, i.e., not broken?		Yes				
10. We	re custody/security seals present?		No				
11. If y	res, were custody/security seals intact?		NA				
12. Was	s the sample received on ice? If yes, the recorded temp is 4°C, i.e. Note: Thermal preservation is not required, if samples are re- minutes of sampling		Yes				
13. If r	to visible ice, record the temperature. Actual sample tem	nperature: <u>4</u> °	<u>°C</u>				
Sampl	e Container						
	e aqueous VOC samples present?		No				
15. Are	e VOC samples collected in VOA Vials?		NA				
16. Is t	he head space less than 6-8 mm (pea sized or less)?		NA				
17. Wa	s a trip blank (TB) included for VOC analyses?		NA				
18. Are	e non-VOC samples collected in the correct containers?		Yes				
19. Is tl	ne appropriate volume/weight or number of sample containers	collected?	Yes				
<u>Field I</u>	_abel_						
20. We	re field sample labels filled out with the minimum inform	ation:					
	Sample ID?		Yes				
	Date/Time Collected?		Yes				
~ ·	Collectors name?		Yes				
	e Preservation	10	ŊŢ				
	es the COC or field labels indicate the samples were prese	erved?	No				
	e sample(s) correctly preserved? ab filteration required and/or requested for dissolved meta	169	NA No				
	• •	uə (	No				
	hase Sample Matrix						
	es the sample have more than one phase, i.e., multiphase?		No				
27. If y	ves, does the COC specify which phase(s) is to be analyzed	d?	NA				
<u>Subco</u>	ntract Laboratory						
28. Are	e samples required to get sent to a subcontract laboratory?		No				

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	S
Client Instruction		

ubcontract Lab: NA



envirotech Inc.

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





5796 U.S. Hwy 64 Farmington, NM 87401

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





# envirotech

**Practical Solutions for a Better Tomorrow** 

# **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E306166

Job Number: 01058-0007

Received: 6/21/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 6/27/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 6/27/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E306166 Date Received: 6/21/2023 10:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/21/2023 10:00:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

Field Offices:

Southern New Mexico Area Lynn Jarboe Technical Representative/Client Services

Office: 505-421-LABS(5227) Cell: 505-320-4759 ljarboe@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

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

Envirotech Web Address: www.envirotech-inc.com



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#### **Sample Summary**

		Sample Sum	mary		
WPX Energy - Carlsbad		Project Name:	North Brushy PW	Line	Reported:
5315 Buena Vista Dr		Project Number:	01058-0007		Toportour
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		06/27/23 13:38
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH13	E306166-01A	Aqueous	06/20/23	06/21/23	Poly 500mL
	E306166-01B	Aqueous	06/20/23	06/21/23	Poly 250mL; HNO3
	E306166-01C	Aqueous	06/20/23	06/21/23	VOA Vial, 40mL; HCl
	E306166-01D	Aqueous	06/20/23	06/21/23	VOA Vial, 40mL; HCl
	E306166-01E	Aqueous	06/20/23	06/21/23	VOA Vial, 40mL; HCl



•

	5	ample Da	ata			
WPX Energy - Carlsbad	Project Name	:: Nort	h Brushy PW Lii	ne		
5315 Buena Vista Dr	Project Numb	ber: 0105	8-0007			Reported:
Carlsbad NM, 88220	Project Mana	ger: Gilb	ert Moreno		6/27/2023 1:38:20PM	
		BH13				
		E306166-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	ug/L	ug/L	Analys	st: IY		Batch: 2326012
Benzene	ND	1.00	1	06/26/23	06/26/23	
Ethylbenzene	ND	1.00	1	06/26/23	06/26/23	
Toluene	ND	1.00	1	06/26/23	06/26/23	
o-Xylene	ND	1.00	1	06/26/23	06/26/23	
p,m-Xylene	ND	2.00	1	06/26/23	06/26/23	
Fotal Xylenes	ND	1.00	1	06/26/23	06/26/23	
urrogate: Bromofluorobenzene		103 %	70-130	06/26/23	06/26/23	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	06/26/23	06/26/23	
Surrogate: Toluene-d8		98.7 %	70-130	06/26/23	06/26/23	
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analys	st: RAS		Batch: 2325053
Total Dissolved Solids	52900	50.0	1	06/22/23	06/23/23	
<b>Wet Chemistry by 9040C/4500H+B</b>	pH Units	pH Units	Analys	st: BA		Batch: 2325065
H @25°C	6.62		1	06/22/23 14:02	06/22/23 14:49	Н5
Wet Chemistry by SM2320B	mg/L	mg/L	Analys	st: KH		Batch: 2326002
Fotal Alkalinity (as CaCO3 at pH 4.5)	194	10.0	1	06/26/23	06/26/23	
Vet Chemistry by 9050A/2510B	uS/cm	uS/cm	Analys	st: BA		Batch: 2325060
Specific Conductance (@ 25 C)	72000	10.0	1	06/22/23	06/22/23	
Dissolved Metals by EPA 6010C	mg/L	mg/L	Analys	st: RKS		Batch: 2326005
Calcium	6720	100	100	06/26/23	06/26/23	
ron	ND	200	100	06/26/23	06/26/23	
Agnesium	820	100	100	06/26/23	06/26/23	
otassium	ND	100	100	06/26/23	06/26/23	
Sodium	12900	200	100	06/26/23	06/26/23	
Sodium Absorption Ratio (CALC)	39.5		1	06/27/23	06/27/23	

# Sample Data


# Sample Data

		L				
WPX Energy - Carlsbad	Project Name:	North 1	Brushy PW Lir	ne		
5315 Buena Vista Dr	Project Number:	01058-	0007			Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert	Moreno			6/27/2023 1:38:20PM
	В	H13				
	E30	6166-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/L	mg/L	Analys	st: BA		Batch: 2325054
luoride	ND	250	1000	06/21/23	06/21/23	
Chloride	33800	2000	1000	06/21/23	06/21/23	
Vitrite-N	ND	250	1000	06/21/23 16:26	06/21/23 19:16	
Vitrate-N	ND	250	1000	06/21/23 16:26	06/21/23 19:16	
-Phosphate-P	ND	250	1000	06/21/23 16:26	06/21/23 19:16	
Sulfate	ND	2000	1000	06/21/23	06/21/23	



# **QC Summary Data**

		200		ing Duu					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		orth Brushy P 058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager:		ilbert Moreno					6/27/2023 1:38:20PM
Carisbau INVI, 88220		Floject Mallagel.	U						0/2//2023 1.38.201 W
	V	olatile Organic	c Compo	unds by EP	PA 82601	3			Analyst: IY
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	Notes
Blank (2326012-BLK1)						I	Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Benzene	ND	1.00							
Ethylbenzene	ND	1.00							
Toluene	ND	1.00							
o-Xylene	ND	1.00							
p,m-Xylene	ND	2.00							
Total Xylenes	ND	1.00							
Surrogate: Bromofluorobenzene	10.3		10.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.82		10.0		98.2	70-130			
Surrogate: Toluene-d8	9.89		10.0		98.9	70-130			
LCS (2326012-BS1)						I	Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Benzene	49.4	1.00	50.0		98.7	70-130			
Ethylbenzene	47.9	1.00	50.0		95.7	80-120			
Toluene	48.3	1.00	50.0		96.5	80-120			
o-Xylene	50.5	1.00	50.0		101	70-130			
p,m-Xylene	99.9	2.00	100		99.9	70-130			
Total Xylenes	150	1.00	150		100	70-130			
Surrogate: Bromofluorobenzene	10.0		10.0		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.74		10.0		97.4	70-130			
Surrogate: Toluene-d8	9.87		10.0		98.7	70-130			
LCS Dup (2326012-BSD1)						I	Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Benzene	48.5	1.00	50.0		97.0	70-130	1.74	20	
Ethylbenzene	47.1	1.00	50.0		94.3	80-120	1.54	20	
Foluene	47.3	1.00	50.0		94.6	80-120	2.01	20	
p-Xylene	49.8	1.00	50.0		99.6	70-130	1.32	20	
p,m-Xylene	98.3	2.00	100		98.3	70-130	1.58	20	
Total Xylenes	148	1.00	150		98.8	70-130	1.49	20	
Surrogate: Bromofluorobenzene	10.3		10.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	10.1		10.0		101	70-130			



# **QC Summary Data**

		~ ~		v					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name:		orth Brushy P	W Line				Reported:
Carlsbad NM, 88220		Project Number Project Manager		1058-0007 iilbert Moreno					6/27/2023 1:38:20PM
		Wet Chem/	Gravimet	tric by SM2	2540C				Analyst: RAS
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2325053-BLK1)							Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	ND	10.0							
LCS (2325053-BS1)							Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	87.0	10.0	100		87.0	55-134			
Duplicate (2325053-DUP1)				Source:	E306166-	01	Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	52600	10.0		52900			0.635	5	



# **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number Project Manage		North Brushy P )1058-0007 Gilbert Moreno					<b>Reported:</b> 6/27/2023 1:38:20PM
		Wet Chem	histry by s	9040C/4500	H+B				Analyst: BA
Analyte	Result pH Units	Reporting Limit pH Units	Spike Level pH Units	Source Result pH Units	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
.CS (2325065-BS1)	pri olina	pri Units	pri Units	pri Onits	70	70			nalyzed: 06/22/23
Н	7.91		8.00		99.5	98.75-101.2	5		
Duplicate (2325065-DUP1)				Source:	E306166	-01	Prepared: 0	6/22/23 A	nalyzed: 06/22/23
Н	6.62			6.62			0.00	20	



# **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number Project Manager	: (	North Brushy P 11058-0007 Gilbert Moreno					<b>Reported:</b> 6/27/2023 1:38:20PM
		Wet Ch	emistry	by SM2320	В				Analyst: KH
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
LCS (2326002-BS1)							Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Total Alkalinity (as CaCO3 at pH 4.5)	241	10.0	250		96.4	70-130			
Duplicate (2326002-DUP1)				Source:	E306169-0	)1	Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Total Alkalinity (as CaCO3 at pH 4.5)	536	10.0		530			1.13	20	



# **QC Summary Data**

				•					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:	0	orth Brushy P 1058-0007					Reported:
Carlsbad NM, 88220		Project Manager	: G	ilbert Moreno					6/27/2023 1:38:20PM
		Wet Chen	nistry by	9050A/251	0B				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	Notes
Blank (2325060-BLK1)							Prepared: 0	6/22/23 At	nalyzed: 06/22/23
Specific Conductance (@ 25 C)	ND	10.0							
LCS (2325060-BS1)							Prepared: 0	6/22/23 A	nalyzed: 06/22/23
Specific Conductance (@ 25 C)	1400	10.0	1410		98.9	98-102			
Duplicate (2325060-DUP1)				Source:	E306166-	01	Prepared: 0	6/22/23 A	nalyzed: 06/22/23
Specific Conductance (@ 25 C)	73400	10.0		72000			1.93	20	



# **QC Summary Data**

				I J Duu					
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	forth Brushy P 1058-0007 Filbert Moreno	W Line				<b>Reported:</b> 6/27/2023 1:38:20PM
				by EPA 6010	0C				Analyst: RKS
Analyte		Reporting	Spike	Source		Rec		RPD	
5	Result	Limit	Level	Result	Rec	Limits	RPD	Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2326005-BLK1)							Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	ND	1.00							
ron	ND	2.00							
Magnesium	ND	1.00							
Potassium	ND	1.00							
Sodium	ND	2.00							
LCS (2326005-BS1)							Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	55.0	1.00	50.0		110	80-120			
ron	110	2.00	100		110	80-120			
Magnesium	54.5	1.00	50.0		109	80-120			
Potassium	5.43	1.00	5.00		109	80-120			
Sodium	19.6	2.00	20.0		98.2	80-120			
Matrix Spike (2326005-MS1)				Source:	E306151-	01	Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	562	10.0	500	39.7	104	75-125			
ron	1070	20.0	1000	ND	107	75-125			
Magnesium	545	10.0	500	25.5	104	75-125			
Potassium	286	10.0	50.0	212	146	75-125			M4
Sodium	1910	20.0	200	1630	139	75-125			M4
Matrix Spike Dup (2326005-MSD1)				Source:	E306151-	01	Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	565	10.0	500	39.7	105	75-125	0.444	20	
ron	1070	20.0	1000	ND	107	75-125	0.0937	20	
Magnesium	534	10.0	500	25.5	102	75-125	2.02	20	
Potassium	280	10.0	50.0	212	135	75-125	2.02	20	M4
Sodium	1860	20.0	200	1630	112	75-125	2.87	20	



## **QC Summary Data**

		$\mathbf{x} \in \mathbf{v}$		ary Data					
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	North Brushy PV 01058-0007 Gilbert Moreno	V Line				<b>Reported:</b> 6/27/2023 1:38:20PM
		Anions b	oy EPA	300.0/9056A					Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2325054-BLK1)							Prepared: 00	5/21/23 A	nalyzed: 06/21/23
Fluoride	ND	0.250							
Chloride	ND	2.00							
Nitrite-N	ND	0.250							
Nitrate-N	ND	0.250							
p-Phosphate-P	ND	0.250							
Sulfate	ND	2.00							
LCS (2325054-BS1)							Prepared: 00	5/21/23 A	nalyzed: 06/21/23
Fluoride	2.66	0.250	2.50		106	90-110			
Chloride	25.1	2.00	25.0		100	90-110			
Nitrite-N	2.59	0.250	2.50		104	90-110			
Nitrate-N	2.64	0.250	2.50		106	90-110			
o-Phosphate-P	12.8	0.250	12.5		103	90-110			
Sulfate	25.6	2.00	25.0		103	90-110			
LCS Dup (2325054-BSD1)							Prepared: 00	5/21/23 A	nalyzed: 06/21/23
Fluoride	2.66	0.250	2.50		106	90-110	0.0301	20	
Chloride	25.1	2.00	25.0		100	90-110	0.0275	20	
Nitrite-N	2.59	0.250	2.50		103	90-110	0.251	20	
Nitrate-N	2.64	0.250	2.50		106	90-110	0.0227	20	
o-Phosphate-P	12.9	0.250	12.5		103	90-110	0.199	20	
Sulfate	25.7	2.00	25.0		103	90-110	0.0990	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.



	Demittons		
WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	06/27/23 13:38
	5315 Buena Vista Dr	WPX Energy - CarlsbadProject Name:5315 Buena Vista DrProject Number:	5315 Buena Vista Dr Project Number: 01058-0007

H5 pH is specified to be performed in the field within 15 minutes of sampling. The sample analysis was performed as quickly as possible.

M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.

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.



Release Project Information

	Client: W	PX Energ	y Permia	n, LLC.		Bill T	D			La	ab Us	se Onl	Y				Т	TAT		EPA P	ogram
		North Bru				Attention: Jim Raley		La	b WO#	#		Job N				1D 20	) 3D	St	andard	CWA	SDWA
		lanager:				Address: 5315 Buena Vis		E	300	10	6	0.05	8-0	201							
		13000 W				City, State, Zip: Carlsbad	NM, 88220					Analys	is an	d Met	hod			_			RCRA
1		e, Zip_Od		79765		Phone: 575-885-7502			by				T								
١.		32-541-7				Email: jim.raley@dvn.co	m		ORO									1	15-0-1-	State	
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ĺ	Collected	l by: Gilbe	ert Morer	10		Incident ID: nAPP2231120	594	t,	0/0	802	826	6010	300		2		TX		×		
	Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID		Lab		TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TDS	Cation/Anion	BGDOC	GDOC			Remarks	5.00
	7:50	6.20.23	А	1		BH13	1			X			-		-						
	8:00	6.20.23	A	1		BH13	2								x		1				
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İ	Note: Sam	ples are dis	carded 30 d	days after	results are reported	d unless other arrangements are m the laboratory with this COC. The	de. Hazardous samp	es will	be retu	rned t	o clie	nt or di	spose	d of a	t the	client ex			report for t	ne analysis	of the
ι	above sdill	hies is appl	cable only	to those s	amples received by	the laboratory with this COC. The	ability of the laborate	y 15 111	inteu to	the al	noun	r paid I	or on	the fe	-				vir		

Received by OCD: 4/15/2024 2:04:17 PM

## **Envirotech Analytical Laboratory**

#### Sample Receipt Checklist (SRC)

Client:	WPX Energy - Carlsbad Da	te Received:	06/21/23	10.00	Work Order ID:	E306166
Phone:		te Logged In:	06/21/23		Logged In By:	Alexa Michaels
Email:		e Date:		17:00 (4 day TAT)	Logged in By.	Alexa Michaels
~ •						
	f Custody (COC)					
	the sample ID match the COC? the number of samples per sampling site location match t	ha COC	Yes			
	samples dropped off by client or carrier?		No	~ . ~ .		
	· · · ·		Yes	Carrier: Courier		
	he 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 i.e, 15 minute hold time, are not included in this disucssion.	field,	Yes		Commer	ts/Resolution
Sample '	<u>Turn Around Time (TAT)</u>					
	e COC indicate standard TAT, or Expedited TAT?		No			
Sample	<u>Cooler</u>					
	sample cooler received?		Yes			
8. If yes,	, was cooler received in good condition?		Yes			
9. Was tl	he sample(s) received intact, i.e., not broken?		Yes			
10. Were	e custody/security seals present?		No			
	s, were custody/security seals intact?		NA			
-	he sample received on ice? If yes, the recorded temp is 4°C, i.e., Note: Thermal preservation is not required, if samples are rec		Yes			
13 If no	minutes of sampling visible ice, record the temperature. Actual sample tem	noratura: 1º	C			
		iperature. <u>4</u>	<u>c</u>			
	<u>Container</u>		V			
	aqueous VOC samples present?		Yes Yes			
	VOC samples collected in VOA Vials? e head space less than 6-8 mm (pea sized or less)?		Yes			
	a trip blank (TB) included for VOC analyses?		No			
	non-VOC samples collected in the correct containers?	11	Yes			
	appropriate volume/weight or number of sample containers	collected?	Yes			
Field La		<b></b>				
	e field sample labels filled out with the minimum informa Sample ID?	ition:	Yes			
	Date/Time Collected?		Yes			
	Collectors name?		Yes			
Sample	Preservation					
21. Does	s the COC or field labels indicate the samples were present	rved?	Yes			
22. Are s	sample(s) correctly preserved?		Yes			
24. Is lał	b filteration required and/or requested for dissolved metal	ls?	Yes			
<u>Multip</u> h	ase Sample Matrix					
-	s the sample have more than one phase, i.e., multiphase?		No			
	s, does the COC specify which phase(s) is to be analyzed	!?	NA			
	ract Laboratory					
	samples required to get sent to a subcontract laboratory?		No			
	· · · · · · · · · · · · · · · · · · ·					



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Project Information

Released to Imaging: 2/17/2025 2:02:20 PM

Chain of Custody

Received by OCD: 4/15/2024 2:04:17 PM

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Client: W	PX Energ	v Permia	n. LLC.	1.2. August	-			Bill To	and the second	- the	1000	-	La	b Us	e On	lv		12 77	-	-	T	AT	-	EPA P	rogram
Project:						Atten	tion: Jim Ra				Lab	WO#	A110-21-22-23	Converting of second	Job	The second second	ber		1D	2D	and the second second	Stand	ard	CWA	SDWA
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City, Stat							: 575-885-7	and the second se				2							-	1			124		
Phone: 8		and the second se					jim.raley@		The second	and the		ROI												State	
Email: De			env.com				WO: MM-1		RNM	1.1		0/0	-		-	0		5	WN	1.9	inter a	NN	CO	UT AZ	TX
Collected	by: Gilbe	ert Moren	10				nt ID: nAPP			-	-	NDR	802	3260	010	300		Anic	1 mm	-	¥				
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	TDS	Cation/Anion	BGDOC		GDOC			Remarks	
7:50	6.20.23	A	15				BH13		provide the second second	1			X		-			X	_			CI	len-	+ Chn	firmed
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5796 U.S. Hwy 64 Farmington, NM 87401

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





# envirotech

**Practical Solutions for a Better Tomorrow** 

# **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E306169

Job Number: 01058-0007

Received: 6/21/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 6/27/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 6/27/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E306169 Date Received: 6/21/2023 10:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/21/2023 10:00:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

Field Offices:

Southern New Mexico Area Lynn Jarboe Technical Representative/Client Services

Office: 505-421-LABS(5227) Cell: 505-320-4759 ljarboe@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

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

Envirotech Web Address: www.envirotech-inc.com



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#### **Sample Summary**

		Sample Sum	mary		
WPX Energy - Carlsbad		Project Name:	North Brushy PW	Line	Reported:
5315 Buena Vista Dr		Project Number:	01058-0007		
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		06/27/23 13:30
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH14	E306169-01A	Aqueous	06/20/23	06/21/23	Poly 500mL
	E306169-01B	Aqueous	06/20/23	06/21/23	Poly 250mL
	E306169-01C	Aqueous	06/20/23	06/21/23	VOA Vial, 40mL; HCl
	E306169-01D	Aqueous	06/20/23	06/21/23	VOA Vial, 40mL; HCl
	E306169-01E	Aqueous	06/20/23	06/21/23	VOA Vial, 40mL; HCl



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	2	ampic D				
WPX Energy - Carlsbad	Project Name		th Brushy PW Li	ne		
5315 Buena Vista Dr	Project Num		58-0007			Reported:
Carlsbad NM, 88220	Project Mana	ager: Gilb	ert Moreno			6/27/2023 1:30:53PM
		BH14				
		E306169-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	ug/L	ug/L	Analy	vst: IY		Batch: 2326012
Benzene	ND	1.00	1	06/26/23	06/26/23	G1
Ethylbenzene	ND	1.00	1	06/26/23	06/26/23	
Toluene	ND	1.00	1	06/26/23	06/26/23	
o-Xylene	ND	1.00	1	06/26/23	06/26/23	
p,m-Xylene	ND	2.00	1	06/26/23	06/26/23	
Total Xylenes	ND	1.00	1	06/26/23	06/26/23	
Surrogate: Bromofluorobenzene		101 %	70-130	06/26/23	06/26/23	
Surrogate: 1,2-Dichloroethane-d4		95.7 %	70-130	06/26/23	06/26/23	
Surrogate: Toluene-d8		101 %	70-130	06/26/23	06/26/23	
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analy	vst: RAS		Batch: 2325053
Total Dissolved Solids	8740	50.0	1	06/22/23	06/23/23	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analy	vst: BA		Batch: 2325065
pH @25°C	6.95		1	06/22/23 14:02	06/22/23 14:49	Н5
Wet Chemistry by SM2320B	mg/L	mg/L	Analy	vst: KH		Batch: 2326002
Total Alkalinity (as CaCO3 at pH 4.5)	530	10.0	1	06/26/23	06/26/23	
Bicarbonate Alkalinity (as CaCO3)	530		1	06/26/23	06/26/23	
Hydroxide Alkalinity (as CaCO3)	0.00		1	06/26/23	06/26/23	
Carbonate Alkalinity (as CaCO3)	0.00		1	06/26/23	06/26/23	
Wet Chemistry by 9050A/2510B	uS/cm	uS/cm	Analy	vst: BA		Batch: 2325060
Specific Conductance (@ 25 C)	13000	10.0	1	06/22/23	06/22/23	

# Sample Data



## **Sample Data**

	Samj	pic Dai	a			
WPX Energy - Carlsbad	Project Name:	North I	Brushy PW Lir	ne		
5315 Buena Vista Dr	Project Number:	01058-	01058-0007			Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert	Moreno			6/27/2023 1:30:53PM
	B	H14				
	E306	169-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
issolved Metals by EPA 6010C	mg/L	mg/L	Analyst: RKS			Batch: 2326005
alcium	1390	10.0	10	06/26/23	06/26/23	
on	ND	20.0	10	06/26/23	06/26/23	
lagnesium	112	10.0	10	06/26/23	06/26/23	
otassium	56.5	10.0	10	06/26/23	06/26/23	
odium	1760	20.0	10	06/26/23	06/26/23	
odium Absorption Ratio (CALC)	12.2		1	06/27/23	06/27/23	
nions by EPA 300.0/9056A	mg/L	mg/L	Analys	st: BA		Batch: 2325054
uoride	ND	25.0	100	06/21/23	06/21/23	
hloride	4660	200	100	06/21/23	06/21/23	
itrite-N	ND	25.0	100	06/21/23 16:26	06/21/23 19:55	
itrate-N	ND	25.0	100	06/21/23 16:26	06/21/23 19:55	
Phosphate-P	ND	25.0	100	06/21/23 16:26	06/21/23 19:55	
ulfate	214	200	100	06/21/23	06/21/23	



# **QC Summary Data**

		200		ing Dun					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		orth Brushy P 058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager:		ilbert Moreno					6/27/2023 1:30:53PM
	V	olatile Organic	Compo	unds by EF	PA 82601	3			Analyst: IY
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	Notes
Blank (2326012-BLK1)							Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Benzene	ND	1.00							
Ethylbenzene	ND	1.00							
Toluene	ND	1.00							
o-Xylene	ND	1.00							
p,m-Xylene	ND	2.00							
Total Xylenes	ND	1.00							
Surrogate: Bromofluorobenzene	10.3		10.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.82		10.0		98.2	70-130			
Surrogate: Toluene-d8	9.89		10.0		98.9	70-130			
LCS (2326012-BS1)						]	Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Benzene	49.4	1.00	50.0		98.7	70-130			
Ethylbenzene	47.9	1.00	50.0		95.7	80-120			
Toluene	48.3	1.00	50.0		96.5	80-120			
p-Xylene	50.5	1.00	50.0		101	70-130			
p,m-Xylene	99.9	2.00	100		99.9	70-130			
Total Xylenes	150	1.00	150		100	70-130			
Surrogate: Bromofluorobenzene	10.0		10.0		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.74		10.0		97.4	70-130			
Surrogate: Toluene-d8	9.87		10.0		98.7	70-130			
LCS Dup (2326012-BSD1)							Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Benzene	48.5	1.00	50.0		97.0	70-130	1.74	20	
Ethylbenzene	47.1	1.00	50.0		94.3	80-120	1.54	20	
Toluene	47.3	1.00	50.0		94.6	80-120	2.01	20	
p-Xylene	49.8	1.00	50.0		99.6	70-130	1.32	20	
p,m-Xylene	98.3	2.00	100		98.3	70-130	1.58	20	
Total Xylenes	148	1.00	150		98.8	70-130	1.49	20	
			10.0		103	70-130			
Surrogate: Bromofluorobenzene	10.3		10.0		105	/0 100			
Surrogate: Bromofluorobenzene Surrogate: 1,2-Dichloroethane-d4	10.3		10.0		101	70-130			



# **QC Summary Data**

		-		v					
WPX Energy - Carlsbad		Project Name:		Jorth Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number	: 0	1058-0007					
Carlsbad NM, 88220		Project Manager	r: C	ilbert Moreno					6/27/2023 1:30:53PM
		Wet Chem/	Gravime	tric by SM2	2540C				Analyst: RAS
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2325053-BLK1)							Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	ND	10.0							
LCS (2325053-BS1)							Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	87.0	10.0	100		87.0	55-134			
Duplicate (2325053-DUP1)				Source:	E306166-	01	Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	52600	10.0		52900			0.635	5	



# **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number Project Manage	:: (	North Brushy P 01058-0007 Gilbert Moreno					<b>Reported:</b> 6/27/2023 1:30:53PM
		Wet Chem	istry by	9040C/4500	H+B				Analyst: BA
Analyte	Result pH Units	Reporting Limit pH Units	Spike Level pH Units	Source Result pH Units	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
LCS (2325065-BS1)	pri onns	pri Units	pri onits	pri onits	70				nalyzed: 06/22/23
ы	7.91		8.00		99.5	98.75-101.2	5		
Duplicate (2325065-DUP1)				Source:	E306166	5-01	Prepared: 0	6/22/23 A	nalyzed: 06/22/23
ън	6.62			6.62			0.00	20	



# **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager	. C	North Brushy PW Line 01058-0007 Gilbert Moreno				<b>Reported:</b> 6/27/2023 1:30:53PM	
		Wet Ch	emistry	by SM2320	В				Analyst: KH
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
LCS (2326002-BS1)							Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Total Alkalinity (as CaCO3 at pH 4.5)	241	10.0	250		96.4	70-130			
Duplicate (2326002-DUP1)				Source:	E306169-0	01	Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Total Alkalinity (as CaCO3 at pH 4.5)	536	10.0		530			1.13	20	



# **QC Summary Data**

				v					
WPX Energy - Carlsbad		Project Name:		orth Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:		1058-0007					6/27/2023 1:30:53PM
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno					6/2//2023 1:30:53PM
		Wet Chem	nistry by	9050A/251	0B				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	Notes
Blank (2325060-BLK1)							Prepared: 0	6/22/23 A1	nalyzed: 06/22/23
Specific Conductance (@ 25 C)	ND	10.0							
LCS (2325060-BS1)							Prepared: 0	6/22/23 A1	nalyzed: 06/22/23
Specific Conductance (@ 25 C)	1400	10.0	1410		98.9	98-102			
Duplicate (2325060-DUP1)				Source:	E306166-	01	Prepared: 0	6/22/23 A1	nalyzed: 06/22/23
Specific Conductance (@ 25 C)	73400	10.0		72000			1.93	20	



# **QC Summary Data**

				i j Duu					
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	orth Brushy P 1058-0007 ilbert Moreno	W Line				<b>Reported:</b> 6/27/2023 1:30:53PM
,				oy EPA 601	0C				Analyst: RKS
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2326005-BLK1)							Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	ND	1.00							
Iron	ND	2.00							
Magnesium	ND	1.00							
Potassium	ND	1.00							
Sodium	ND	2.00							
LCS (2326005-BS1)							Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	55.0	1.00	50.0		110	80-120			
ron	110	2.00	100		110	80-120			
Magnesium	54.5	1.00	50.0		109	80-120			
Potassium	5.43	1.00	5.00		109	80-120			
Sodium	19.6	2.00	20.0		98.2	80-120			
Matrix Spike (2326005-MS1)				Source:	E306151-	01	Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	562	10.0	500	39.7	104	75-125			
ron	1070	20.0	1000	ND	107	75-125			
Magnesium	545	10.0	500	25.5	104	75-125			
Potassium	286	10.0	50.0	212	146	75-125			M4
Sodium	1910	20.0	200	1630	139	75-125			M4
Matrix Spike Dup (2326005-MSD1)				Source:	E306151-	01	Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	565	10.0	500	39.7	105	75-125	0.444	20	
ron	1070	20.0	1000	ND	107	75-125	0.0937	20	
Magnesium	534	10.0	500	25.5	102	75-125	2.02	20	
Potassium	280	10.0	50.0	212	135	75-125	2.02	20	M4
Sodium	1860	20.0	200	1630	112	75-125	2.87	20	



## **QC Summary Data**

		<b>X</b> U N		ary Data	-				
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	Iorth Brushy PV 1058-0007 Jilbert Moreno	V Line				<b>Reported:</b> 6/27/2023 1:30:53PM
		Anions l	by EPA	300.0/9056A					Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2325054-BLK1)							Prepared: 06	5/21/23 A	nalyzed: 06/21/23
Fluoride	ND	0.250							
Chloride	ND	2.00							
Nitrite-N	ND	0.250							
Nitrate-N	ND	0.250							
p-Phosphate-P	ND	0.250							
Sulfate	ND	2.00							
LCS (2325054-BS1)							Prepared: 06	5/21/23 A	nalyzed: 06/21/23
Fluoride	2.66	0.250	2.50		106	90-110			
Chloride	25.1	2.00	25.0		100	90-110			
Nitrite-N	2.59	0.250	2.50		104	90-110			
Nitrate-N	2.64	0.250	2.50		106	90-110			
o-Phosphate-P	12.8	0.250	12.5		103	90-110			
Sulfate	25.6	2.00	25.0		103	90-110			
LCS Dup (2325054-BSD1)							Prepared: 06	5/21/23 A	nalyzed: 06/21/23
Fluoride	2.66	0.250	2.50		106	90-110	0.0301	20	
Chloride	25.1	2.00	25.0		100	90-110	0.0275	20	
Nitrite-N	2.59	0.250	2.50		103	90-110	0.251	20	
Nitrate-N	2.64	0.250	2.50		106	90-110	0.0227	20	
o-Phosphate-P	12.9	0.250	12.5		103	90-110	0.199	20	
Sulfate	25.7	2.00	25.0		103	90-110	0.0990	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.



_				
	WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
	5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
	Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	06/27/23 13:30

G1 pH >2. Sample had a pH of 4.5.

H5 pH is specified to be performed in the field within 15 minutes of sampling. The sample analysis was performed as quickly as possible.

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- 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.



Release

	WPX Energ					Bill To						se On						TA			ogram
	t: North Bru					ention: Jim Raley		Lab	Sa Ba	ŧ	a	Jop I				1D	2D	3D	Standard	CWA	SDWA
	t Manager:					dress: 5315 Buena Vista Dr.		E	30	010	7	OIDE	58.	000	$\mathcal{T}$						
	ss: 13000 W					, State, Zip: Carlsbad, NM, 88	3220		_	_		Analy	sis al	nd Me	ethod	1				RCRA	
	tate, Zip_Oo		79765			one: 575-885-7502			h h												
10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	: 832-541-7					ail: jim.raley@dvn.com			ORC				10.1							State	
	Devon-tear			1		S/WO: MM-155117.AL.RNM	-		RO/	21	0		0.0		ion	MN		TX	NM CO	UT AZ	TX
Collec	ed by: Gilb	ert More	no		Inc	dent ID: nAPP2231126594		Ĵ.	0/0	y 80.	826	601	e 30		/An			12.1	×	1.1	
Time Sample	Date d Sampled	Matrix	No. of Containers	Sample ID	0		Lab Numb	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TDS	Cation/Anion	BGDOC		GDOC		Remarks	
8:05	6.20.23	A	1			BH14	1						х	x							
8:10	6.20.23	A	1			BH14	2								х				. 1		
8:15	6.20.23	А	1			BH14	2)			x											
					_																
	1		0	1	/		1	1	-									-			
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/														2.11			1.1				
ddit	onal Instruc	ctions:																			
					sample. I am awa inds for legal actio	re that tampering with or intentionally m n. Sampled by: GM	nislabelling the	ample	location	٦,									eived on ice the day ss than 6 °C on sub		led or
teling	ished by: (Sign	nature)	Date	20.23	Time 1515	Received by: (Signature))	- Led	0,23	Time	515	-	Rece	eivec	l on i	ce:	10	Use N	e Onl	У		
Relingu	ished by: (Sign	nature) /	Date	Led	Time 1700	Received by: (Signature)	Date 6-2		Time	-		T1				T2	,		T3		
Relinqu	ished by: (Sigr	Mus	Date		Time	Received by: (Signature)	A Date/-	ib	Time	N	n		Ten	np °C	L	+					
ample	Matrix: S - Soil, S					manyo	Contai	er Tu	De: P-	plass	AL					ergla	55. V -	VOA			
						ther arrangements are made. Haza														the analysis	of the
						ratory with this COC. The liability of															

## **Envirotech Analytical Laboratory**

#### Sample Receipt Checklist (SRC)

	WPX Energy - Carlsbad	ate Received:	06/21/23 1	0:00	Work Order ID:	E306169
Phone:	(539) 573-4018	ate Logged In:	06/21/23 1	3:29	Logged In By:	Alexa Michaels
Email:		ue Date:	06/27/23 1	7:00 (4 day TAT)		
Chain o	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	No			
3. Were	samples dropped off by client or carrier?		Yes	Carrier: Courier		
4. Was t	the COC complete, i.e., signatures, dates/times, requeste	d analyses?	Yes			
5. Were	all samples received within holding time? Note: Analysis, such as pH which should be conducted in th		Yes		Common	ts/Resolution
~ .	i.e, 15 minute hold time, are not included in this disucssion.				Commen	ts/Resolution
-	Turn Around Time (TAT)					
6. Did fl	he COC indicate standard TAT, or Expedited TAT?		No			
<u>Sample</u>						
	a sample cooler received?		Yes			
	s, was cooler received in good condition?		Yes			
9. Was t	the sample(s) received intact, i.e., not broken?		Yes			
10. Wer	e custody/security seals present?		No			
11. If ye	es, were custody/security seals intact?		NA			
12. Was 1	the sample received on ice? If yes, the recorded temp is 4°C, i.e Note: Thermal preservation is not required, if samples are re- minutes of sampling	,	Yes			
13. If nc	o visible ice, record the temperature. Actual sample te	mperature: 4°	с			
	Container	<u> </u>	-			
_	aqueous VOC samples present?		Yes			
	VOC samples collected in VOA Vials?		Yes			
	he head space less than 6-8 mm (pea sized or less)?		Yes			
	a trip blank (TB) included for VOC analyses?		No			
	non-VOC samples collected in the correct containers?		Yes			
			100			
18. Are	e appropriate volume/weight or number of sample container	s collected?	Yes			
18. Are 19. Is the	e appropriate volume/weight or number of sample container ahel	s collected?	Yes			
18. Are 19. Is the <u>Field La</u>	<u>abel</u>		Yes			
<ol> <li>18. Are</li> <li>19. Is the</li> <li>Field La</li> <li>20. Were</li> </ol>			Yes Yes			
<ol> <li>18. Are</li> <li>19. Is the</li> <li>Field L:</li> <li>20. Were</li> </ol>	abel re field sample labels filled out with the minimum inform Sample ID? Date/Time Collected?					
<ol> <li>Are</li> <li>Is the</li> <li>Field L:</li> <li>Were</li> </ol>	abel e field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name?		Yes			
<ul> <li>18. Are</li> <li>19. Is the</li> <li>Field La</li> <li>20. Were</li> </ul>	abel e field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name? • <b>Preservation</b>	nation:	Yes Yes Yes			
<ol> <li>Are</li> <li>Is the</li> <li>Field La</li> <li>Were</li> <li>Sample</li> <li>Doe:</li> </ol>	abel e field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name? Preservation is the COC or field labels indicate the samples were press	nation:	Yes Yes Yes Yes			
<ol> <li>Are</li> <li>Is the</li> <li>Field L:</li> <li>Were</li> <li>Sample</li> <li>Doe:</li> <li>22. Are</li> </ol>	abel e field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name? Preservation is the COC or field labels indicate the samples were press sample(s) correctly preserved?	nation: erved?	Yes Yes Yes Yes Yes			
<ol> <li>Are</li> <li>Is the</li> <li>Field La</li> <li>Were</li> <li>Sample</li> <li>Doe</li> <li>Doe</li> <li>Are</li> <li>Is la</li> </ol>	abel e field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name? Preservation as the COC or field labels indicate the samples were press sample(s) correctly preserved? b filteration required and/or requested for dissolved met	nation: erved?	Yes Yes Yes Yes			
<ol> <li>Are</li> <li>Is the</li> <li>Field La</li> <li>Were</li> <li>Were</li> <li>Sample</li> <li>Doe:</li> <li>Are</li> <li>Is la</li> <li>Multiph</li> </ol>	abel abel the field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name? Preservation the COC or field labels indicate the samples were press sample(s) correctly preserved? Ib filteration required and/or requested for dissolved met hase Sample Matrix	nation: erved? als?	Yes Yes Yes Yes Yes Yes			
<ol> <li>Are</li> <li>Is the</li> <li>Field L:</li> <li>Were</li> <li>Were</li> <li>Sample</li> <li>Does</li> <li>Are</li> <li>Is la</li> <li>Multiph</li> <li>Does</li> </ol>	abel e field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name? Preservation s the COC or field labels indicate the samples were pres sample(s) correctly preserved? Ib filteration required and/or requested for dissolved met hase Sample Matrix is the sample have more than one phase, i.e., multiphase	nation: erved? als? ?	Yes Yes Yes Yes Yes Yes			
<ol> <li>Are</li> <li>Is the</li> <li>Field La</li> <li>Were</li> <li>Were</li> <li>Sample</li> <li>Does</li> <li>Are</li> <li>Is la</li> <li>Multiph</li> <li>Does</li> </ol>	abel abel the field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name? Preservation as the COC or field labels indicate the samples were press sample(s) correctly preserved? ab filteration required and/or requested for dissolved met hase Sample Matrix	nation: erved? als? ?	Yes Yes Yes Yes Yes Yes			
<ol> <li>Are</li> <li>Is the</li> <li>Field L:</li> <li>Were</li> <li>Were</li> <li>Were</li> <li>Sample</li> <li>Doe:</li> <li>Are</li> <li>Are</li> <li>Is la</li> <li>Multiph</li> <li>Doe:</li> <li>The</li> </ol>	abel e field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name? Preservation s the COC or field labels indicate the samples were pres sample(s) correctly preserved? Ib filteration required and/or requested for dissolved met hase Sample Matrix is the sample have more than one phase, i.e., multiphase	nation: erved? als? ?	Yes Yes Yes Yes Yes Yes			
<ol> <li>Are</li> <li>Is the</li> <li>Field La</li> <li>Were</li> <li>Were</li> <li>Were</li> <li>Were</li> <li>Sample</li> <li>Doe:</li> <li>Are</li> <li>Multiph</li> <li>Doe:</li> <li>Ti yee</li> <li>Subcom</li> <li>Are</li> </ol>	abel e field sample labels filled out with the minimum inform Sample ID? Date/Time Collected? Collectors name? Preservation es the COC or field labels indicate the samples were press sample(s) correctly preserved? lb filteration required and/or requested for dissolved met hase Sample Matrix es the sample have more than one phase, i.e., multiphase' es, does the COC specify which phase(s) is to be analyzed	nation: erved? als? ed?	Yes Yes Yes Yes Yes Yes			



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Project Information

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Chain of Custody

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





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**Practical Solutions for a Better Tomorrow** 

# **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E306190

Job Number: 01058-0007

Received: 6/23/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 6/29/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 6/29/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E306190 Date Received: 6/23/2023 7:30:00AM

Gilbert Moreno,



Page 391 of 540

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/23/2023 7:30:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

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#### **Sample Summary**

		Sample Sum	mary		
WPX Energy - Carlsbad		Project Name:	North Brushy PW	Line	Reported:
5315 Buena Vista Dr		Project Number:	01058-0007		Reported
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		06/29/23 14:47
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH18	E306190-01A	Aqueous	06/22/23	06/23/23	Poly 500mL
	E306190-01B	Aqueous	06/22/23	06/23/23	Poly 250mL
	E306190-01C	Aqueous	06/22/23	06/23/23	VOA Vial, 40mL; HCl
	E306190-01D	Aqueous	06/22/23	06/23/23	VOA Vial, 40mL; HCl
	E306190-01E	Aqueous	06/22/23	06/23/23	VOA Vial, 40mL; HCl



	5	ample Da	ala					
WPX Energy - Carlsbad	Project Name	: Nort	h Brushy PW Li	ne				
5315 Buena Vista Dr	Project Numb	oer: 0105	8-0007			Reported:		
Carlsbad NM, 88220	Project Mana	ger: Gilb	ert Moreno			6/29/2023 2:47:36PM		
		BH18						
		E306190-01						
		Reporting						
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes		
Volatile Organic Compounds by EPA 8260B	ug/L	ug/L	Analy	st: IY	Batch: 2326012			
Benzene	ND	1.00	1	06/26/23	06/26/23	G1		
Ethylbenzene	ND	1.00	1	06/26/23	06/26/23			
oluene	ND	1.00	1	06/26/23	06/26/23			
-Xylene	ND	1.00	1	06/26/23	06/26/23			
o,m-Xylene	ND	2.00	1	06/26/23	06/26/23			
Total Xylenes	ND	1.00	1	06/26/23	06/26/23			
urrogate: Bromofluorobenzene		102 %	70-130	06/26/23	06/26/23			
urrogate: 1,2-Dichloroethane-d4		99.5 %	70-130	06/26/23	06/26/23			
Surrogate: Toluene-d8		99.3 %	70-130	06/26/23	06/26/23			
<b>Wet Chem/Gravimetric by SM2540C</b>	mg/L	mg/L	Analy	st: RAS		Batch: 2325053		
Fotal Dissolved Solids	875	10.0	1	06/23/23	06/23/23			
<b>Wet Chemistry by 9040C/4500H+B</b>	pH Units	pH Units	Analy	st: BA		Batch: 2326067		
H @25°C	7.89		1	06/29/23 10:39	06/29/23 14:00	Н5		
Wet Chemistry by SM2320B	mg/L	mg/L	Analy	Analyst: KH				
Total Alkalinity (as CaCO3 at pH 4.5)	454	10.0	1	06/26/23	06/26/23			
Vet Chemistry by 9050A/2510B	uS/cm	uS/cm	Analy	st: RAS		Batch: 2326052		
Specific Conductance (@ 25 C)	1150	10.0	1	06/29/23	06/29/23			
Dissolved Metals by EPA 6010C	mg/L	mg/L	Analy	st: RKS		Batch: 2326005		
Calcium	41.0	1.00	1	06/26/23	06/26/23			
ron	ND	2.00	1	06/26/23	06/26/23			
/lagnesium	4.28	1.00	1	06/26/23	06/26/23			
otassium	3.24	1.00	1	06/26/23	06/26/23			
Sodium	262	2.00	1	06/26/23	06/26/23			
Sodium Absorption Ratio (CALC)	10.4		1	06/27/23	06/27/23			

# Sample Data



# Sample Data

		L				
WPX Energy - Carlsbad	Project Name:	North	Brushy PW Lii	ne		
5315 Buena Vista Dr	Project Number:	01058		Reported:		
Carlsbad NM, 88220		6/29/2023 2:47:36PM				
		BH18				
	E3	06190-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/L	mg/L	Analyst: RAS			Batch: 2325063
luoride	3.26	0.250	1	06/22/23	06/23/23	
Chloride	113	2.00	1	06/22/23	06/23/23	
litrite-N	ND	0.250	1	06/22/23 12:33	06/23/23 10:34	
Nitrate-N	18.3	0.250	1	06/22/23 12:33	06/23/23 10:34	
-Phosphate-P	ND	0.250	1	06/22/23 12:33	06/23/23 10:34	
Sulfate	60.6	2.00	1	06/22/23	06/23/23	



## **QC Summary Data**

				ily Data					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		orth Brushy P 1058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno					6/29/2023 2:47:36PM
	V	olatile Organi	c Compo	unds by EF	PA 82601	3			Analyst: IY
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	Notes
Blank (2326012-BLK1)							Prepared: 04	6/26/23 A	nalyzed: 06/26/23
Benzene	ND	1.00							
Ethylbenzene	ND	1.00							
Toluene	ND	1.00							
p-Xylene	ND	1.00							
o,m-Xylene	ND	2.00							
Fotal Xylenes	ND	1.00							
Surrogate: Bromofluorobenzene	10.3		10.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.82		10.0		98.2	70-130			
Surrogate: Toluene-d8	9.89		10.0		98.9	70-130			
LCS (2326012-BS1)						]	Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Benzene	49.4	1.00	50.0		98.7	70-130			
Ethylbenzene	47.9	1.00	50.0		95.7	80-120			
Foluene	48.3	1.00	50.0		96.5	80-120			
o-Xylene	50.5	1.00	50.0		101	70-130			
o,m-Xylene	99.9	2.00	100		99.9	70-130			
Total Xylenes	150	1.00	150		100	70-130			
Surrogate: Bromofluorobenzene	10.0		10.0		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.74		10.0		97.4	70-130			
Surrogate: Toluene-d8	9.87		10.0		98.7	70-130			
LCS Dup (2326012-BSD1)							Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Benzene	48.5	1.00	50.0		97.0	70-130	1.74	20	
Ethylbenzene	47.1	1.00	50.0		94.3	80-120	1.54	20	
Foluene	47.3	1.00	50.0		94.6	80-120	2.01	20	
o-Xylene	49.8	1.00	50.0		99.6	70-130	1.32	20	
o,m-Xylene	98.3	2.00	100		98.3	70-130	1.58	20	
Total Xylenes	148	1.00	150		98.8	70-130	1.49	20	
Surrogate: Bromofluorobenzene	10.3		10.0		103	70-130			
1. 1. 5. 11 1	10.1		10.0		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	10.1		10.0		101	70-150			


### **QC Summary Data**

		L L		•					
WPX Energy - Carlsbad		Project Name:		North Brushy P	W Line				Reported:
5315 Buena Vista Dr Carlsbad NM, 88220		Project Number Project Manager		)1058-0007 Gilbert Moreno					6/29/2023 2:47:36PM
		Wet Chem/	Gravime	tric by SM2	2540C				Analyst: RAS
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2325053-BLK1)							Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	ND	10.0							
LCS (2325053-BS1)							Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	87.0	10.0	100		87.0	55-134			
Duplicate (2325053-DUP1)				Source:	E306166-	01	Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	52600	10.0		52900			0.635	5	



## **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number		North Brushy P )1058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manage	r: (	Gilbert Moreno					6/29/2023 2:47:36PM
		Wet Chem	histry by	9040C/4500	H+B				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	pH Units	pH Units	pH Units	pH Units	%	%	%	%	Notes
LCS (2326067-BS1)							Prepared: 0	6/29/23 A	nalyzed: 06/29/23
Н	7.96		8.00		99.8	98.75-101.23	5		
Duplicate (2326067-DUP1)				Source:	E306190	-01	Prepared: 0	6/29/23 A	nalyzed: 06/29/23
Н	7.85			7.89			0.508	20	



## **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number Project Manager	: (	North Brushy P 1058-0007 Bilbert Moreno					<b>Reported:</b> 6/29/2023 2:47:36PM
		Wet Ch	emistry	by SM2320	В				Analyst: KH
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
LCS (2326002-BS1)							Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Total Alkalinity (as CaCO3 at pH 4.5)	241	10.0	250		96.4	70-130			
Duplicate (2326002-DUP1)				Source:	E306169-0	)1	Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Total Alkalinity (as CaCO3 at pH 4.5)	536	10.0		530			1.13	20	



## **QC Summary Data**

				-					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		lorth Brushy P 1058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager	: 0	ilbert Moreno					6/29/2023 2:47:36PM
		Wet Cher	nistry by	9050A/251	0B				Analyst: RAS
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	Notes
Blank (2326052-BLK1)							Prepared: 0	6/29/23 A	nalyzed: 06/29/23
Specific Conductance (@ 25 C)	ND	10.0							
LCS (2326052-BS1)							Prepared: 0	6/29/23 A	nalyzed: 06/29/23
Specific Conductance (@ 25 C)	1390	10.0	1410		98.2	98-102			
Duplicate (2326052-DUP1)				Source:	E306190-	01	Prepared: 0	6/29/23 A	nalyzed: 06/29/23
Specific Conductance (@ 25 C)	1210	10.0		1150			4.57	20	



### **QC Summary Data**

		<b>L</b> = 10		i j Duu	•				
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	orth Brushy PV 1058-0007 ilbert Moreno	W Line				<b>Reported:</b> 6/29/2023 2:47:36PM
				oy EPA 601(	0C				Analyst: RKS
Analyte		Reporting	Spike	Source		Rec		RPD	
-	Result	Limit	Level	Result	Rec	Limits	RPD	Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2326005-BLK1)							Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	ND	1.00							
ron	ND	2.00							
Magnesium	ND	1.00							
Potassium	ND	1.00							
Sodium	ND	2.00							
LCS (2326005-BS1)							Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	55.0	1.00	50.0		110	80-120			
ron	110	2.00	100		110	80-120			
Magnesium	54.5	1.00	50.0		109	80-120			
Potassium	5.43	1.00	5.00		109	80-120			
Sodium	19.6	2.00	20.0		98.2	80-120			
Matrix Spike (2326005-MS1)				Source: 1	E306151-	-01	Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	562	10.0	500	39.7	104	75-125			
ron	1070	20.0	1000	ND	107	75-125			
Magnesium	545	10.0	500	25.5	104	75-125			
Potassium	286	10.0	50.0	212	146	75-125			M4
Sodium	1910	20.0	200	1630	139	75-125			M4
Matrix Spike Dup (2326005-MSD1)				Source: 1	E306151-	01	Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	565	10.0	500	39.7	105	75-125	0.444	20	
ron	1070	20.0	1000	ND	107	75-125	0.0937	20	
Magnesium	534	10.0	500	25.5	102	75-125	2.02	20	
Potassium	280	10.0	50.0	212	135	75-125	2.02	20	M4
Sodium	1860	20.0	200	1630	112	75-125	2.87	20	



#### **QC Summary Data**

		<b>X</b> U N		ary Data	•				
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	North Brushy PV 1058-0007 Gilbert Moreno	V Line				<b>Reported:</b> 6/29/2023 2:47:36PM
		Anions by EPA 300.0/9056A							
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2325063-BLK1)							Prepared: 00	5/22/23 A	nalyzed: 06/22/23
Fluoride	ND	0.250							
Chloride	ND	2.00							
Nitrite-N	ND	0.250							
Nitrate-N	ND	0.250							
o-Phosphate-P	ND	0.250							
Sulfate	ND	2.00							
LCS (2325063-BS1)							Prepared: 00	5/22/23 A	nalyzed: 06/23/23
Fluoride	2.56	0.250	2.50		103	90-110			
Chloride	24.5	2.00	25.0		98.0	90-110			
Nitrite-N	2.64	0.250	2.50		105	90-110			
Nitrate-N	2.53	0.250	2.50		101	90-110			
o-Phosphate-P	12.4	0.250	12.5		99.1	90-110			
Sulfate	24.6	2.00	25.0		98.2	90-110			
LCS Dup (2325063-BSD1)							Prepared: 00	6/22/23 A	nalyzed: 06/23/23
Fluoride	2.59	0.250	2.50		104	90-110	1.09	20	
Chloride	24.6	2.00	25.0		98.5	90-110	0.557	20	
Nitrite-N	2.64	0.250	2.50		105	90-110	0.0152	20	
Nitrate-N	2.53	0.250	2.50		101	90-110	0.150	20	
o-Phosphate-P	12.5	0.250	12.5		100	90-110	1.06	20	
Sulfate	24.7	2.00	25.0		98.9	90-110	0.719	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.



WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	06/29/23 14:47

G1 pH >2. Sample had a pH of 5.5.

H5 pH is specified to be performed in the field within 15 minutes of sampling. The sample analysis was performed as quickly as possible.

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- 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.



Release

Received by OCD: 4/15/2024 2:04:17 PM

Client: WPX Energy Permian, LLC.	Bill To						e Onl				TAT					EPA P	rogram
Project: North Brushy PW Line	Attention: Jim Raley		Lab	wo#			Jop N	lum	ber		1D	2D	3D	Sta	andard	CWA	SDW
Project Manager: Gilbert Moreno	Address: 5315 Buena Vista Dr.		ES	06	19	Ó	da	SØ	00	57				50	ay TAT		
Address: 13000 W County Rd 100	City, State, Zip: Carlsbad, NM, 88220					ŀ	Analys	sis ar	nd Me	thoc	4						RCRA
City, State, Zip_Odessa, TX, 79765	Phone: 575-885-7502			þλ									- 1	-			
Phone: 832-541-7719	Email: jim.raley@dvn.com		1.1	ORO												State	
Email: Devon-team@etechenv.com	WBS/WO: MM-155117.AL.RNM			0/0		-		0.		5	MN			1. 7	NM CO	UT AZ	TX
Collected by: Gilbert Moreno	Incident ID: nAPP2231126594		-	HO/OH	802	3260	010	300		Anio			¥		×		
Time Date Matrix No. of Complet D		Lab	th(ft	GRO	(p)	by	als 6	ride		/uo	00		Ŋ			2.2	
Sampled Sampled Matrix Containers Sample ID	N	umber	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TDS	Cation/Anion	BGDOC		GDOC			Remarks	
8:00 6.22.23 A 5	BH18	1			x			X	x	X							
	/																
										-					_		
				-	-	-	-	-				-		1			
						_	-	_					_	_			
Dative																	
( jul of																	
			-	-	-	-	-	-		-		-			-		
					-			-		-							
Additional Instructions:										_	_						
, (field sampler), attest to the validity and authenticity of this sample. date or time of collection is considered fraud and may be grounds for		ng the sam	ple lo	cation,	/										on ice the day n 6 °C on subs	they are samp equent days.	oled or
Relinquished by: (Signature) Date Time 4.22.23	Da Received by: (Signature) Da	te	0	Time	300		Rece	ived	l on id	ce:		ab Us	se On	nly			
Relinquished by: (Signature) Date Le 2223	Received by: (Signature) () Da	te 1.22	3	Time	84	2	<u>T1</u>				T2			_	<u>T3</u>		
Relinquished by: (Signature) Date Time	400 Received by: (Stenature) Da	1/2/3	23	Time T	:3	)	AVG	Tem	np °C	4	(						
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other		ontainer	Type	: g - g	lass,	_		_			_	ass, v	- VO	A			
Note: Samples are discarded 30 days after results are reported															eport for t	he analysis	of the
above samples is applicable only to those samples received by												- Sub					

#### **Envirotech Analytical Laboratory**

#### Sample Receipt Checklist (SRC)

Client:	WPX Energy - Carlsbad D	ate Received:	06/23/23 0	7:30	Work Order ID:	E306190
Phone:	(539) 573-4018 D	ate Logged In:	06/23/23 0	8:42	Logged In By:	Caitlin Mars
Email:	devon-team@ensolum.com D	ue Date:	06/29/23 1	7:00 (4 day TAT)		
Chain o	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 t	he COC complete, i.e., signatures, dates/times, requested	1 analyses?	Yes			
5. Were	all samples received within holding time? Note: Analysis, such as pH which should be conducted in th i.e, 15 minute hold time, are not included in this disucssion.	e field,	Yes		Commen	ts/Resolution
Sample	Turn Around Time (TAT)					
-	he COC indicate standard TAT, or Expedited TAT?		Yes			
Sample	Cooler					
	a sample cooler received?		Yes			
8. If yes	s, was cooler received in good condition?		Yes			
9. Was t	he sample(s) received intact, i.e., not broken?		Yes			
10. Wer	e custody/security seals present?		No			
11. If ye	es, were custody/security seals intact?		NA			
12. Was	the sample received on ice? If yes, the recorded temp is 4°C, i.e Note: Thermal preservation is not required, if samples are re		Yes			
10 70	minutes of sampling		a			
13. If no	o visible ice, record the temperature. Actual sample ter	mperature: <u>4</u> °	<u>C</u>			
	<u>Container</u>					
	aqueous VOC samples present?		Yes			
	VOC samples collected in VOA Vials?		Yes			
	he head space less than 6-8 mm (pea sized or less)?		Yes			
	a trip blank (TB) included for VOC analyses?		No			
	non-VOC samples collected in the correct containers?	11 4 19	Yes			
	e appropriate volume/weight or number of sample container	s collected?	Yes			
Field La	abel_ e field sample labels filled out with the minimum inform					
	Sample ID?	iation:	Yes			
	Date/Time Collected?		Yes			
	Collectors name?		Yes			
<u>Sample</u>	Preservation					
21. Doe	s the COC or field labels indicate the samples were prese	erved?	Yes			
	sample(s) correctly preserved?		Yes			
24. Is la	b filteration required and/or requested for dissolved met	als?	Yes			
	hase Sample Matrix					
Multipl	s the sample have more than one phase, i.e., multiphase?	•	No			
-		d2	NA			
26. Doe	es, does the COC specify which phase(s) is to be analyze	u.	14/1			
26. Doe 27. If ye	es, does the COC specify which phase(s) is to be analyze tract Laboratory		nn.			
26. Doe 27. If ye <u>Subcon</u>			No			

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



envirotech Inc.

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5796 U.S. Hwy 64 Farmington, NM 87401

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





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**Practical Solutions for a Better Tomorrow** 

## **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E306167

Job Number: 01058-0007

Received: 6/21/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 6/27/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 6/27/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E306167 Date Received: 6/21/2023 10:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/21/2023 10:00:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

Field Offices:

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

Envirotech Web Address: www.envirotech-inc.com



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#### **Sample Summary**

		Sample Sum	mary		
WPX Energy - Carlsbad		Project Name:	North Brushy PW	Line	Reported:
5315 Buena Vista Dr		Project Number:	01058-0007		Reported:
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		06/27/23 13:28
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH19	E306167-01A	Aqueous	06/20/23	06/21/23	Poly 500mL
	E306167-01B	Aqueous	06/20/23	06/21/23	Poly 250mL
	E306167-01C	Aqueous	06/20/23	06/21/23	VOA Vial, 40mL; HCl
	E306167-01D	Aqueous	06/20/23	06/21/23	VOA Vial, 40mL; HCl
	E306167-01E	Aqueous	06/20/23	06/21/23	VOA Vial, 40mL; HCl



		ampie D				
WPX Energy - Carlsbad	Project Name	e: Nor	th Brushy PW Li	ine		
5315 Buena Vista Dr	Project Numl	ber: 010	58-0007			Reported:
Carlsbad NM, 88220	Project Mana	iger: Gilb	ert Moreno			6/27/2023 1:28:39PM
		BH19				
		E306167-01				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	ug/L	ug/L	Analy	vst: IY		Batch: 2326012
Benzene	ND	1.00	1	06/26/23	06/26/23	G1
Ethylbenzene	ND	1.00	1	06/26/23	06/26/23	
Toluene	ND	1.00	1	06/26/23	06/26/23	
p-Xylene	ND	1.00	1	06/26/23	06/26/23	
o,m-Xylene	ND	2.00	1	06/26/23	06/26/23	
Fotal Xylenes	ND	1.00	1	06/26/23	06/26/23	
Surrogate: Bromofluorobenzene		102 %	70-130	06/26/23	06/26/23	
Surrogate: 1,2-Dichloroethane-d4		96.9 %	70-130	06/26/23	06/26/23	
Surrogate: Toluene-d8		100 %	70-130	06/26/23	06/26/23	
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analy	vst: RAS		Batch: 2325053
Fotal Dissolved Solids	1370	10.0	1	06/22/23	06/23/23	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analy	vst: BA		Batch: 2325065
ьН @25°С	7.30		1	06/22/23 14:02	06/22/23 14:49	Н5
Wet Chemistry by SM2320B	mg/L	mg/L	Analy	vst: KH		Batch: 2326002
Fotal Alkalinity (as CaCO3 at pH 4.5)	1940	10.0	1	06/26/23	06/26/23	
Bicarbonate Alkalinity (as CaCO3)	1940		1	06/26/23	06/26/23	
Iydroxide Alkalinity (as CaCO3)	0.00		1	06/26/23	06/26/23	
Carbonate Alkalinity (as CaCO3)	0.00		1	06/26/23	06/26/23	
Vet Chemistry by 9050A/2510B	uS/cm	uS/cm	Analy	vst: BA		Batch: 2325060
Specific Conductance (@ 25 C)	2800	10.0	1	06/22/23	06/22/23	

## Sample Data



#### **Sample Data**

	Sam	pie Da	a						
WPX Energy - Carlsbad	Project Name:	North 1	Brushy PW Lii	ne					
5315 Buena Vista Dr	Project Number:	01058-	0007			Reported:			
Carlsbad NM, 88220	Project Manager:	Gilbert	Moreno			6/27/2023 1:28:39PM			
	В	H19							
	E306	167-01							
		Reporting							
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes			
bissolved Metals by EPA 6010C	mg/L	mg/L	Analys	st: RKS		Batch: 2326005			
alcium	269	1.00	1	06/26/23	06/26/23				
on	ND	2.00	1	06/26/23	06/26/23				
lagnesium	87.3	1.00	1	06/26/23	06/26/23				
otassium	3.84	1.00	1	06/26/23	06/26/23				
odium	301	2.00	1	06/26/23	06/26/23				
odium Absorption Ratio (CALC)	4.08		1	06/27/23	06/27/23				
nions by EPA 300.0/9056A	mg/L	mg/L	Analys	st: BA		Batch: 2325054			
uoride	4.82	2.50	10	06/21/23	06/21/23				
hloride	339	20.0	10	06/21/23	06/21/23				
itrite-N	ND	2.50 10		06/21/23 16:26	06/21/23 19:36				
itrate-N	4.08	2.50	10	06/21/23 16:26	06/21/23 19:36				
Phosphate-P	ND	2.50	10	06/21/23 16:26					
ulfate	10	06/21/23	06/21/23						



#### **QC Summary Data**

		<u>vvb</u>		iry Data	•						
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: North Brushy PW Line Project Number: 01058-0007							Reported:		
Carlsbad NM, 88220		Project Manager:		ilbert Moreno				6/27/2023 1:28:39PM			
	V	olatile Organio	3		Analyst: IY						
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit			
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	Notes		
Blank (2326012-BLK1)							Prepared: 0	6/26/23 A	nalyzed: 06/26/23		
Benzene	ND	1.00									
Ethylbenzene	ND	1.00									
Toluene	ND	1.00									
o-Xylene	ND	1.00									
p,m-Xylene	ND	2.00									
Total Xylenes	ND	1.00									
Surrogate: Bromofluorobenzene	10.3		10.0		103	70-130					
Surrogate: 1,2-Dichloroethane-d4	9.82		10.0		98.2	70-130					
Surrogate: Toluene-d8	9.89		10.0		98.9	70-130					
LCS (2326012-BS1)						]	Prepared: 0	6/26/23 A	nalyzed: 06/26/23		
Benzene	49.4	1.00	50.0		98.7	70-130					
Ethylbenzene	47.9	1.00	50.0		95.7	80-120					
Toluene	48.3	1.00	50.0		96.5	80-120					
p-Xylene	50.5	1.00	50.0		101	70-130					
o,m-Xylene	99.9	2.00	100		99.9	70-130					
Total Xylenes	150	1.00	150		100	70-130					
Surrogate: Bromofluorobenzene	10.0		10.0		100	70-130					
Surrogate: 1,2-Dichloroethane-d4	9.74		10.0		97.4	70-130					
Surrogate: Toluene-d8	9.87		10.0		98.7	70-130					
LCS Dup (2326012-BSD1)							Prepared: 0	6/26/23 A	nalyzed: 06/26/23		
Benzene	48.5	1.00	50.0		97.0	70-130	1.74	20			
Ethylbenzene	47.1	1.00	50.0		94.3	80-120	1.54	20			
Foluene	47.3	1.00	50.0		94.6	80-120	2.01	20			
p-Xylene	49.8	1.00	50.0		99.6	70-130	1.32	20			
p,m-Xylene	98.3	2.00	100		98.3	70-130	1.58	20			
Total Xylenes	148	1.00	150		98.8	70-130	1.49	20			
			10.0		102	70-130					
•	10.3		10.0		103	70-150					
Surrogate: Bromofluorobenzene Surrogate: 1,2-Dichloroethane-d4	10.3 10.1		10.0 10.0		103	70-130					



## **QC Summary Data**

		-		v					
WPX Energy - Carlsbad		Project Name:		Jorth Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number	: 0	1058-0007					
Carlsbad NM, 88220		Project Manager	r: C	Gilbert Moreno					6/27/2023 1:28:39PM
		Wet Chem/	Gravime	tric by SM2	2540C				Analyst: RAS
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2325053-BLK1)							Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	ND	10.0							
LCS (2325053-BS1)							Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	87.0	10.0	100		87.0	55-134			
Duplicate (2325053-DUP1)				Source:	E306166-	01	Prepared: 0	6/22/23 A	nalyzed: 06/23/23
Total Dissolved Solids	52600	10.0		52900			0.635	5	



## **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number Project Manage		North Brushy P )1058-0007 Gilbert Moreno					<b>Reported:</b> 6/27/2023 1:28:39PM
		Wet Chem	histry by s	9040C/4500	H+B				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	pH Units	pH Units	pH Units	pH Units	%	%	%	%	Notes
LCS (2325065-BS1)							Prepared: 0	6/22/23 A	nalyzed: 06/22/23
Н	7.91		8.00		99.5	98.75-101.2	5		
Duplicate (2325065-DUP1)				Source:	E306166	5-01	Prepared: 0	6/22/23 A	nalyzed: 06/22/23
Н	6.62			6.62			0.00	20	



## **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number Project Manager	: (	North Brushy P 11058-0007 Gilbert Moreno					<b>Reported:</b> 6/27/2023 1:28:39PM
		Wet Ch	emistry	by SM2320	В				Analyst: KH
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
LCS (2326002-BS1)							Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Total Alkalinity (as CaCO3 at pH 4.5)	241	10.0	250		96.4	70-130			
Duplicate (2326002-DUP1)				Source:	E306169-0	)1	Prepared: 0	6/26/23 A	nalyzed: 06/26/23
Total Alkalinity (as CaCO3 at pH 4.5)	536	10.0		530			1.13	20	



## **QC Summary Data**

				v					
WPX Energy - Carlsbad		Project Name:	N	orth Brushy P				Reported:	
5315 Buena Vista Dr		Project Number:	0	1058-0007					
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno					6/27/2023 1:28:39PM
		Wet Chem	nistry by	9050A/251	0B				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	Notes
Blank (2325060-BLK1)							Prepared: 0	6/22/23 Ai	nalyzed: 06/22/23
Specific Conductance (@ 25 C)	ND	10.0							
LCS (2325060-BS1)							Prepared: 0	6/22/23 Ai	nalyzed: 06/22/23
Specific Conductance (@ 25 C)	1400	10.0	1410		98.9	98-102			
Duplicate (2325060-DUP1)				Source:	E306166-	01	Prepared: 0	6/22/23 Ai	nalyzed: 06/22/23
Specific Conductance (@ 25 C)	73400	10.0		72000			1.93	20	



### **QC Summary Data**

		$\mathbf{t} \in \mathcal{S}$		ary Date					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		lorth Brushy P 1058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager:	Project Manager: Gi						6/27/2023 1:28:39PM
		Dissolved	by EPA 601	0C				Analyst: RKS	
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2326005-BLK1)							Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	ND	1.00							
ron	ND	2.00							
Magnesium	ND	1.00							
Potassium	ND	1.00							
Sodium	ND	2.00							
LCS (2326005-BS1)							Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	55.0	1.00	50.0		110	80-120			
ron	110	2.00	100		110	80-120			
Magnesium	54.5	1.00	50.0		109	80-120			
Potassium	5.43	1.00	5.00		109	80-120			
Sodium	19.6	2.00	20.0		98.2	80-120			
Matrix Spike (2326005-MS1)				Source:	E306151-	-01	Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	562	10.0	500	39.7	104	75-125			
ron	1070	20.0	1000	ND	107	75-125			
Magnesium	545	10.0	500	25.5	104	75-125			
Potassium	286	10.0	50.0	212	146	75-125			M4
Sodium	1910	20.0	200	1630	139	75-125			M4
Matrix Spike Dup (2326005-MSD1)				Source:	E306151-	-01	Prepared: 0	6/26/23 A	Analyzed: 06/26/23
Calcium	565	10.0	500	39.7	105	75-125	0.444	20	
ron	1070	20.0	1000	ND	107	75-125	0.0937	20	
Magnesium	534	10.0	500	25.5	102	75-125	2.02	20	
Potassium	280	10.0	50.0	212	135	75-125	2.02	20	M4
Sodium	1860	20.0	200	1630	112	75-125	2.87	20	



#### **QC Summary Data**

				ary Data					
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	North Brushy PV 01058-0007 Gilbert Moreno	V Line				<b>Reported:</b> 6/27/2023 1:28:39PM
		Anions b			Analyst: BA				
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2325054-BLK1)							Prepared: 00	5/21/23 A	nalyzed: 06/21/23
Fluoride	ND	0.250							
Chloride	ND	2.00							
Nitrite-N	ND	0.250							
Nitrate-N	ND	0.250							
p-Phosphate-P	ND	0.250							
Sulfate	ND	2.00							
LCS (2325054-BS1)							Prepared: 00	5/21/23 A	nalyzed: 06/21/23
Fluoride	2.66	0.250	2.50		106	90-110			
Chloride	25.1	2.00	25.0		100	90-110			
Nitrite-N	2.59	0.250	2.50		104	90-110			
Nitrate-N	2.64	0.250	2.50		106	90-110			
o-Phosphate-P	12.8	0.250	12.5		103	90-110			
Sulfate	25.6	2.00	25.0		103	90-110			
LCS Dup (2325054-BSD1)							Prepared: 00	5/21/23 A	nalyzed: 06/21/23
Fluoride	2.66	0.250	2.50		106	90-110	0.0301	20	
Chloride	25.1	2.00	25.0		100	90-110	0.0275	20	
Nitrite-N	2.59	0.250	2.50		103	90-110	0.251	20	
Nitrate-N	2.64	0.250	2.50		106	90-110	0.0227	20	
o-Phosphate-P	12.9	0.250	12.5		103	90-110	0.199	20	
Sulfate	25.7	2.00	25.0		103	90-110	0.0990	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.



WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	06/27/23 13:28

G1 pH >2. Sample had a pH of 4.5.

H5 pH is specified to be performed in the field within 15 minutes of sampling. The sample analysis was performed as quickly as possible.

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- 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.



Reference Information

		y Permia			Bill To	Lab Use Only									TAT EPA Progr					
	North Bru				Attention: Jim Raley		Lab	WO#	t	-	Jop V	lum	ber		1D	2D	3D	Standard	CWA	SDWA
	Aanager:				Address: 5315 Buena Vista Dr.		Ea	36	910	1+	0103	3-8-	ax	1						
	13000 W				City, State, Zip: Carlsbad, NM,	88220					Analys	is ar	nd Me	etho	d					RCRA
	e, Zip_Od		79765		Phone: 575-885-7502			λq												
	32-541-7				Email: jim.raley@dvn.com			ORO										1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	State	
	evon-tean				WBS/WO: MM-155117.AL.RNM	Ν		RO/	Ħ	0		0.0		uo	MN		×	NM CO	UT AZ	TX
Collected	d by: Gilbe	ert Morei	10		Incident ID: nAPP2231126594		£	0/0	80	826	6010	e 30		/Ani			¥	×		
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	TDS	Cation/Anion	BGDOC		GDOC		Remarks	ŧ.
9:00	6.20.23	А	1		BH19	1		00 -1	-	>	2	X	X	0						
9:10	6.20.23	А	1		BH19	2								х						
9:20	6.20.23	А	1	1	BH19	3			x											
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					. I am aware that tampering with or intentionally	r mislabelling the sa	mple lo	ocation,	,									eived on ice the day		led or
			Date	i may be grounds fo Time		Data	-	Time	-	_						_				
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Relinquish	ed by: (Sign	ature)	- Leo	0-23 17	100 Received by: (Signature)	Date 6-20	2-22	Time	70	0	T1				T2	-		Т3	_	
	ed by: (Sign		So G.	-20-23 Z	230 Received by: (Signature)	A 10/21	12	Time	n	~	AVG	Tem	nº C	L	ł					
ample Mat	trix: S - Soil S	d - Solid Se		Aqueous, O - Other		Containe	TVD	P. P - 0	plass		Contraction of the second s				er al	ass 1/	- 1/04			
					d unless other arrangements are made. Ha													The report for the	ne analycie	of the
					y the laboratory with this COC. The liability											c cxpi	ense.	the report for t	ie analysis	or the
Sove sall	ihies is appli	cable only	to those se	imples received b	y the aboratory with this COC. The lability	or the laboratory	is inffil	leu lu	che af	noun	t paid T		i the r	epor	0					
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						Page 15 o						0				-				

#### **Envirotech Analytical Laboratory**

	: Please take note of any NO checkmarks. no response concerning these items within 24 hours of the c	-	-	Checklist (SRC) samples will be analyzed as re	avested.	
Client:		te Received:	06/21/23	· · ·	Work Order ID:	E306167
Phone:	(539) 573-4018 Da	te Logged In:	06/21/23	13:21	Logged In By:	Alexa Michaels
Email:	devon-team@ensolum.com Du	e Date:	06/27/23	17:00 (4 day TAT)		
Chain of	Custody (COC)					
	he sample ID match the COC?		Yes			
	he number of samples per sampling site location match	the COC	No			
	samples dropped off by client or carrier?		Yes	Carrier: Courier		
4. Was th	e COC complete, i.e., signatures, dates/times, requested	analyses?	Yes			
5. Were a	all samples received within holding time?	·	Yes			
	Note: Analysis, such as pH which should be conducted in the	field,			Commen	ts/Resolution
Somula	i.e, 15 minute hold time, are not included in this disucssion. <b>Furn Around Time (TAT)</b>				<u>commen</u>	ty/ <b>ICCOULION</b>
	e COC indicate standard TAT, or Expedited TAT?		No			
Sample (	· •		110			
	sample cooler received?		Yes			
	was cooler received in good condition?		Yes			
• •	the sample(s) received intact, i.e., not broken?		Yes			
	custody/security seals present?					
	s, were custody/security seals intact?		No			
•	he sample received on ice? If yes, the recorded temp is 4°C, i.e	691290	NA			
	Note: Thermal preservation is not required, if samples are rec minutes of sampling	ceived w/i 15	Yes			
13. If no	visible ice, record the temperature. Actual sample ten	nperature: <u>4°</u>	<u>C</u>			
-	<u>Container</u>					
	equeous VOC samples present?		Yes			
	VOC samples collected in VOA Vials?		Yes			
	e head space less than 6-8 mm (pea sized or less)?		Yes			
	a trip blank (TB) included for VOC analyses?		No			
	non-VOC samples collected in the correct containers?		Yes			
9. Is the	appropriate volume/weight or number of sample containers	collected?	Yes			
Field La						
	field sample labels filled out with the minimum information in the same set of	ation:	Vac			
	Sample ID? Date/Time Collected?		Yes			
	Collectors name?		Yes Yes			
	Preservation		103			
_	the COC or field labels indicate the samples were prese	rved?	Yes			
	ample(s) correctly preserved?		Yes			
	filteration required and/or requested for dissolved meta	ls?	Yes			
Multipha	ase Sample Matrix					
-	the sample have more than one phase, i.e., multiphase?		No			
	s, does the COC specify which phase(s) is to be analyzed	1?	NA			
-	ract Laboratory					
	amples required to get sent to a subcontract laboratory?		No			
	a subcontract laboratory specified by the client and if so	who?	NA	Subcontract Lab: NA		
	nstruction					



Released to Imaging: 2/17/2025 2:02:20 PM

Project Information	CI	nain of Cu	stody	Y										Page _	Received by OCD: 4/15/2024 2:04:17 PM
Client: WPX Energy Permian, LLC.	Bill To	-16			Lab	Use (	Only		1	-		TA	T	EPA Program	
Project: North Brushy PW Line	Attention: Jim Raley		Lah	WO#	In the second	10	h Num	ber	-	1D	2D	CONTRACT OF	Standard	CWA SDWA	- 2
Project Manager: Gilbert Moreno	Address: 5315 Buena Vista Dr.		F3	61	116=	FOI	157-	m	7						- Di
Address: 13000 W County Rd 100	City, State, Zip: Carlsbad, NM, 88220	)			10-	Ana	alysis a	nd M	etho	1		-	Transformer,	RCRA	4
City, State, Zip_Odessa, TX, 79765	Phone: 575-885-7502			2	1	1	1				T	T			15,
Phone: 832-541-7719	Email: jim.raley@dvn.com			ROL	1					- 1				State	- 20
Email: Devon-team@etechenv.com	WBS/WO: MM-155117.AL.RNM			0/0		1	0		5	Z			NM CO	UT AZ TX	- 24
Collected by: Gilbert Moreno	Incident ID: nAPP2231126594	and the second second	-	/DR	8021	010	300.		Anio	NN		¥			- 2:
Time Date Matrix No. of Containers, Sample ID		Lab Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	Metals 6010	Chloride 300.0	TDS	Cation/Anion	BGDOC		GDOC		Remarks	04:1
9:00 6.20.23 A A5	BH19	1	-	- 00	X	> ~	X	X	X	Ш		0	hier	+ Confirmed	PM
9:10 6.20.23	BH19					-	-		1	-			pul	UTITIC	-
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Additional Instructions:		1				•							1.1		
<ol> <li>(field sampler), attest to the validity and authenticity of this sample.</li> <li>date or time of collection is considered fraud and may be grounds for</li> </ol>		elling the san	nple lo	cation,									eived on ice the day ss than 6 °C on subs	they are sampled or equent days.	
Relinquished by: (Signature) Date Time (4.20.23 15	15 Received by (Signature)	Date 20	23	Time	515	Re	ceived	d on i	ce:	La	b Use	e Only	Y		
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Relinquished by: (Signature) Date Time	2 3 Received by: (Signature)	Date 171	6	Time	v		10 T	0.0	L	4			_ <u>19</u>		14
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other	-antippp	ULCI	101	210	L	and the second se	/G Ten			1		VOL		and an other section and	
Note: Samples are discarded 30 days after results are reported	d unless other arrangements are made. Hazardo	Container us samples v	will be	retur	ned to c	lient o	r dispos	sed of	at the	client	exper	nse. T	The report for t	he analysis of the	
above samples is applicable only to those samples received by	the laboratory with this COC. The liability of the l	aboratory is	s limite	ed to t	he amo	unt pa	id for o	n the	report	-		-		-	age 4
		no 17 of					E			E			VII	ote	Cnz

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5796 U.S. Hwy 64 Farmington, NM 87401

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





# envirotech

**Practical Solutions for a Better Tomorrow** 

## **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E308026

Job Number: 01058-0007

Received: 8/4/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 8/11/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 8/11/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E308026 Date Received: 8/4/2023 8:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 8/4/2023 8:00:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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

Field Offices:

Southern New Mexico Area Lynn Jarboe Technical Representative/Client Services

Office: 505-421-LABS(5227) Cell: 505-320-4759 ljarboe@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

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

Envirotech Web Address: www.envirotech-inc.com



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#### **Sample Summary**

		Sample Sum	mary		
WPX Energy - Carlsbad		Project Name:	North Brushy PW	Line	Reported:
5315 Buena Vista Dr		Project Number:	01058-0007		Reported.
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		08/11/23 10:26
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH21	E308026-01A	Aqueous	08/03/23	08/04/23	Poly 500mL
	E308026-01B	Aqueous	08/03/23	08/04/23	Poly 500mL
	E308026-01C	Aqueous	08/03/23	08/04/23	VOA Vial, 40mL; HCl
	E308026-01D	Aqueous	08/03/23	08/04/23	VOA Vial, 40mL; HCl
	E308026-01E	Aqueous	08/03/23	08/04/23	VOA Vial, 40mL; HCl



	Su	mpic D.					
WPX Energy - Carlsbad	Project Name:	Nort	h Brushy PW Lii	ne			
5315 Buena Vista Dr	Project Number	: 0105	01058-0007			Reported:	
Carlsbad NM, 88220	Project Manager	r: Gilbo	ert Moreno			8/11/2023 10:26:18AM	
		BH21					
	E	308026-01					
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analys	st: KF		Batch: 2332019	
Total Dissolved Solids	3350	10.0	1	08/07/23	08/07/23		
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analys	st: BA		Batch: 2332024	
ьН @25°С	7.37		1	08/08/23 08:24	08/08/23 10:31	Н5	
Wet Chemistry by SM2320B	mg/L	mg/L	Analys	st: KH		Batch: 2332057	
Fotal Alkalinity (as CaCO3 at pH 4.5)	1960	10.0	1	08/09/23	08/10/23		
Wet Chemistry by 9050A/2510B	uS/cm	uS/cm	Analys	st: KF		Batch: 2332033	
Specific Conductance (@ 25 C)	5090	10.0	1	08/08/23	08/08/23		
Volatile Organics by EPA 8021B	ug/L	ug/L	Analyst: IY			Batch: 2332036	
Benzene	ND	1.00	1	08/08/23	08/08/23		
Ethylbenzene	ND	1.00	1	08/08/23	08/08/23		
Toluene	ND	1.00	1	08/08/23	08/08/23		
o-Xylene	ND	1.00	1	08/08/23	08/08/23		
o,m-Xylene	ND	2.00	1	08/08/23	08/08/23		
Total Xylenes	ND	1.00	1	08/08/23	08/08/23		
Surrogate: 4-Bromochlorobenzene-PID	9	7.6 %	70-130	08/08/23	08/08/23		
Dissolved Metals by EPA 6010C	mg/L	mg/L	Analys	st: JL		Batch: 2332025	
Calcium	6560	20.0	20	08/08/23	08/08/23		
Iron	503	40.0	20	08/08/23	08/08/23		
Magnesium	303	20.0	20	08/08/23	08/08/23		
Potassium	55.2	20.0	20	08/08/23	08/08/23		
Sodium	341	40.0	20	08/08/23	08/08/23		
Sodium	341						

## Sample Data



## Sample Data

		•							
WPX Energy - Carlsbad	Project Name: North Brushy PW Line								
5315 Buena Vista Dr	Project Number:	01058-	0007		Reported:				
Carlsbad NM, 88220	Project Manager:	Gilber	Moreno	8/11/2023 10:26:18AM					
	В	H21							
	E30	8026-01							
		Reporting							
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes			
Anions by EPA 300.0/9056A	mg/L	mg/L	L Analyst: BA			Batch: 2331091			
luoride	ND	5.00	20	08/04/23	08/08/23				
Chloride	1380	40.0	20	08/04/23	08/08/23				
litrite-N	ND	5.00	20	08/04/23 14:14	08/08/23 11:00	G1			
Nitrate-N	13.2	5.00	20	08/04/23 14:14	08/08/23 11:00	G1			
-Phosphate-P	ND	5.00	20	08/04/23 14:14	08/08/23 11:00	G1			
Sulfate	230	40.0	20	08/04/23	08/08/23				



## **QC Summary Data**

		~		v					
WPX Energy - Carlsbad		Project Name:	Ν	North Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:	0	1058-0007					
Carlsbad NM, 88220		Project Manager	:: C	Bilbert Moreno				:	8/11/2023 10:26:18AM
		Wet Chem/	Gravime	tric by SM2	2540C				Analyst: KF
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2332019-BLK1)							Prepared: 0	8/07/23 Ai	nalyzed: 08/07/23
Total Dissolved Solids	ND	10.0							
LCS (2332019-BS1)							Prepared: 0	8/07/23 Ai	nalyzed: 08/07/23
Total Dissolved Solids	101	10.0	100		101	55-134			
Duplicate (2332019-DUP1)				Source:	E308026-	01	Prepared: 0	8/07/23 Ai	nalyzed: 08/07/23
Total Dissolved Solids	3220	10.0		3350			4.05	5	



## **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name:North Brushy PW LineProject Number:01058-0007							Reported:
Carlsbad NM, 88220		Project Manage	er: O	Gilbert Moreno					8/11/2023 10:26:18AM
		Wet Chem	histry by	9040C/4500	H+B				Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	pH Units	pH Units	pH Units	pH Units	%	%	%	%	Notes
LCS (2332024-BS1)						]	Prepared: 0	8/08/23 Ai	nalyzed: 08/08/23
Н	8.06		8.00		100	98.75-101.25			
Duplicate (2332024-DUP1)				Source:	E308026	6-01	Prepared: 0	8/08/23 A	nalyzed: 08/08/23
ън	7.37			7.37			0.00	20	



## **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name:North Brushy PW LineProject Number:01058-0007Project Manager:Gilbert Moreno						٤	<b>Reported:</b> 3/11/2023 10:26:18AM
		Wet Ch	emistry	by SM2320	В				Analyst: KH
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
LCS (2332057-BS1)							Prepared: 0	8/09/23 Ar	nalyzed: 08/10/23
Total Alkalinity (as CaCO3 at pH 4.5)	256	10.0	250		102	70-130			
Duplicate (2332057-DUP1)				Source:	E307105-	01	Prepared: 0	8/09/23 Ar	nalyzed: 08/10/23
Total Alkalinity (as CaCO3 at pH 4.5)	77.0	10.0		79.0			2.56	20	



## **QC Summary Data**

				•					
WPX Energy - Carlsbad 5315 Buena Vista Dr	Project Name: Project Number:	0	orth Brushy P 1058-0007					Reported:	
Carlsbad NM, 88220		Project Manager	: 0	ilbert Moreno				8	3/11/2023 10:26:18AM
		Wet Chen	nistry by	9050A/251	0B				Analyst: KF
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	Notes
Blank (2332033-BLK1)							Prepared: 0	8/08/23 Ar	nalyzed: 08/08/23
Specific Conductance (@ 25 C)	ND	10.0							
LCS (2332033-BS1)							Prepared: 0	8/08/23 Ar	nalyzed: 08/08/23
Specific Conductance (@ 25 C)	1410	10.0	1410		100	98-102			
Duplicate (2332033-DUP1)				Source:	E308026-	01	Prepared: 0	8/08/23 Ar	nalyzed: 08/08/23
Specific Conductance (@ 25 C)	5080	10.0		5090			0.197	20	


## **QC Summary Data**

		$\mathbf{t} \in \mathbf{v}$		ary Dat					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		North Brushy P )1058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager:		Gilbert Moreno					8/11/2023 10:26:18AM
		Volatile O	rganics	by EPA 802	21B				Analyst: IY
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	Notes
Blank (2332036-BLK1)							Prepared: 0	8/09/23 A	nalyzed: 08/09/23
Benzene	ND	1.00							
Ethylbenzene	ND	1.00							
Toluene	ND	1.00							
o-Xylene	ND	1.00							
p,m-Xylene	ND	2.00							
Total Xylenes	ND	1.00							
Surrogate: 4-Bromochlorobenzene-PID	154		160		96.5	70-130			
LCS (2332036-BS1)							Prepared: 0	8/08/23 A	nalyzed: 08/08/23
Benzene	96.1	1.00	100		96.1	70-130			
Ethylbenzene	93.2	1.00	100		93.2	70-130			
Foluene	96.4	1.00	100		96.4	70-130			
p-Xylene	96.4	1.00	100		96.4	70-130			
p,m-Xylene	193	2.00	200		96.5	70-130			
Total Xylenes	289	1.00	300		96.4	70-130			
Surrogate: 4-Bromochlorobenzene-PID	155		160		97.0	70-130			
Matrix Spike (2332036-MS1)				Source:	E308026-	01	Prepared: 0	8/08/23 A	nalyzed: 08/08/23
Benzene	462	5.00	500	ND	92.4	54-133			
Ethylbenzene	449	5.00	500	ND	89.7	61-133			
Toluene	464	5.00	500	ND	92.8	61-130			
p-Xylene	467	5.00	500	ND	93.4	63-131			
o,m-Xylene	930	10.0	1000	ND	93.0	63-131			
Total Xylenes	1400	5.00	1500	ND	93.1	63-131			
Surrogate: 4-Bromochlorobenzene-PID	780		800		97.6	70-130			
Matrix Spike Dup (2332036-MSD1)				Source:	E308026-	01	Prepared: 0	8/08/23 A	analyzed: 08/08/23
Benzene	477	5.00	500	ND	95.5	54-133	3.26	20	
Ethylbenzene	463	5.00	500	ND	92.6	61-133	3.10	20	
Toluene	479	5.00	500	ND	95.8	61-130	3.21	20	
p-Xylene	480	5.00	500	ND	96.1	63-131	2.85	20	
p,m-Xylene	959	10.0	1000	ND	95.9	63-131	3.03	20	
Total Xylenes	1440	5.00	1500	ND	95.9	63-131	2.97	20	
Surrogate: 4-Bromochlorobenzene-PID	778		800		97.2	70-130			



## **QC Summary Data**

		$\mathbf{x} \in \mathcal{Z}$		ary Dat	~				
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	Iorth Brushy P 1058-0007 Gilbert Moreno					<b>Reported:</b> 8/11/2023 10:26:18AM
		Dissolved	Metals	by EPA 601	0C				Analyst: JL
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2332025-BLK1)							Prepared: 0	8/08/23 A	Analyzed: 08/08/23
Calcium	ND	1.00							
ron	ND	2.00							
Magnesium	ND	1.00							
otassium	ND	1.00							
Sodium	ND	2.00							
LCS (2332025-BS1)							Prepared: 0	8/08/23 A	Analyzed: 08/08/23
Calcium	51.4	1.00	50.0		103	80-120			
ron	103	2.00	100		103	80-120			
Magnesium	52.6	1.00	50.0		105	80-120			
Potassium	5.13	1.00	5.00		103	80-120			
Godium	19.1	2.00	20.0		95.3	80-120			
Matrix Spike (2332025-MS1)				Source:	E308026-	01	Prepared: 0	8/08/23 A	Analyzed: 08/08/23
Calcium	6970	20.0	50.0	6560	812	75-125			M4
ron	617	40.0	100	503	114	75-125			
Agnesium	351	20.0	50.0	303	96.4	75-125			
Potassium	62.1	20.0	5.00	55.2	139	75-125			M4
Sodium	354	40.0	20.0	341	62.0	75-125			M4
Matrix Spike Dup (2332025-MSD1)				Source:	E308026-	01	Prepared: 0	8/08/23 A	Analyzed: 08/08/23
Calcium	7250	20.0	50.0	6560	NR	75-125	3.99	20	M4
ron	571	40.0	100	503	68.2	75-125	7.74	20	M2
Magnesium	359	20.0	50.0	303	112	75-125	2.25	20	
otassium	59.0	20.0	5.00	55.2	76.0	75-125	5.19	20	
Sodium	375	40.0	20.0	341	168	75-125	5.82	20	M4



## **QC Summary Data**

		$\mathbf{x} \in \mathcal{Z}$		ary Data	•				
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	lorth Brushy PW 1058-0007 Gilbert Moreno	/ Line				<b>Reported:</b> 8/11/2023 10:26:18AM
				Analyst: BA					
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2331091-BLK1)							Prepared: 08	3/04/23 A	nalyzed: 08/08/23
Fluoride	ND	0.250							
Chloride	ND	2.00							
Nitrite-N	ND	0.250							
Nitrate-N	ND	0.250							
p-Phosphate-P	ND	0.250							
Sulfate	ND	2.00							
LCS (2331091-BS1)							Prepared: 08	3/04/23 A	nalyzed: 08/08/23
Fluoride	2.59	0.250	2.50		104	90-110			
Chloride	24.3	2.00	25.0		97.2	90-110			
Nitrite-N	2.58	0.250	2.50		103	90-110			
Nitrate-N	2.50	0.250	2.50		100	90-110			
o-Phosphate-P	12.3	0.250	12.5		98.2	90-110			
Sulfate	24.3	2.00	25.0		97.4	90-110			
LCS Dup (2331091-BSD1)							Prepared: 08	3/04/23 A	nalyzed: 08/08/23
Fluoride	2.59	0.250	2.50		104	90-110	0.0579	20	
Chloride	24.3	2.00	25.0		97.2	90-110	0.0267	20	
Nitrite-N	2.58	0.250	2.50		103	90-110	0.233	20	
Nitrate-N	2.51	0.250	2.50		100	90-110	0.0319	20	
o-Phosphate-P	12.2	0.250	12.5		97.9	90-110	0.226	20	
Sulfate	24.3	2.00	25.0		97.4	90-110	0.00247	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.



WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	08/11/23 10:26

- G1 Samples recieved on Friday August 4th were loaded onto instrument within holding time but due to instrument failure were not ran within holding time over weekend.
- H5 pH is specified to be performed in the field within 15 minutes of sampling. The sample analysis was performed as quickly as possible.
- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- 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.



Receiption Project Information

Received by OCD: 4/15/2024 2:04:17 PM

	PX Energ					Bill To					ab Us	se On	1					TA		EPA P	rogram
	North Bru					tention: Jim Raley			wO#			Job				1D	2D	3D	Standard	CWA	SDWA
	lanager:					dress: 5315 Buena Vista I		E	308	621	0	010:	58.	-00	27				5 Day TAT		
	13000 W					y, State, Zip: Carlsbad, NN	M, 88220					Analy				d					RCRA
	e, Zip_Oc		79765		Ph	one: 575-885-7502			bγ											12 m -	
	32-541-7				En	nail: jim.raley@dvn.com			ORO							0			1.000	State	
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ollected	by: Gilbe	ert More	no		Inc	nAPP2312845934	Ŧ	d/o	803	826	6010	e 30		/Ani	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		1X	×			
Time	Date	Matrix	No. of	Sample I	n		Lab	Depth(ft.)	TPH GRO/DRO/ORO by 8015	ВТЕХ ЬУ 8021	VOC by 8260	Metals 6010	Chloride 300.0		Cation/Anion	BGDOC		GDOC		Remarks	
Sampled	Sampled		Containers	Sumple it			Numbe	Del	TPH 801	BTE	2	Me	Chl	TDS	Cat	BG		GD		Nemarks	
9:45	8.3.23	A	5			BH21	1	1	1	x			x	x	x	-					
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Kink	m R	Haey	8	3-23	2300	L'aitta/la	m 814/2	23	0.	:00	/	AVG	Ten	np °C	_	2					
Sample	fix: S - Soil, S	d - Solid, Sg	- Sludge, A	- Aqueous, O	- Other		Contain	er Typ	oe:g-	glass,	p - p	oly/p	lasti	c, ag -	amb	er gla	ass, v	- VOA	4		
Note: Sam	ples are dis	carded 30	days after	results are re	eported unless	other arrangements are made.	Hazardous samples	will b	pe retu	rned t	o clie	nt or d	dispos	ed of	at the	e clien	nt exp	ense.	The report for t	he analysis	of the
above sam	ples is appl	licable only	to those s	amples rece	ived by the labo	pratory with this COC. The liabil	lity of the laboratory	is lim	ited to	the ar	moun	t paid	for o	n the i	repor	t.	-				
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#### **Envirotech Analytical Laboratory**

#### Sample Receipt Checklist (SRC)

Client:	WPX Energy - Carlsbad Da	te Received:	08/04/23	08:00	Work Order ID:	E308026
Phone:	(539) 573-4018 Da	te Logged In:	08/04/23	08:34	Logged In By:	Caitlin Mars
Email:		e Date:	08/10/23	17:00 (4 day TAT)		
Chain o	f Custody (COC)					
1. Does 1	the sample ID match the COC?		Yes			
	the number of samples per sampling site location match t	he COC	Yes			
	samples dropped off by client or carrier?		Yes	Carrier: Courier		
4. Was th	he 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,	Yes		Common	ts/Resolution
a .	i.e, 15 minute hold time, are not included in this disucssion.				<u>Commen</u>	ts/ Resolution
	Turn Around Time (TAT) the COC indicate standard TAT, or Expedited TAT?		Yes			
	•		105			
Sample 7 Was a	sample cooler received?		Yes			
	, was cooler received in good condition?		Yes			
•	he sample(s) received intact, i.e., not broken?					
	e custody/security seals present?		Yes			
	s, were custody/security seals intact?		No			
•		(0) <b>10</b> C	NA			
	he sample received on ice? If yes, the recorded temp is 4°C, i.e., Note: Thermal preservation is not required, if samples are rec minutes of sampling	eived w/i 15	Yes			
13. If no	visible ice, record the temperature. Actual sample tem	perature: <u>4</u> °	<u>C</u>			
	Container					
	aqueous VOC samples present?		Yes			
	VOC samples collected in VOA Vials?		Yes			
	e head space less than 6-8 mm (pea sized or less)?		Yes			
	a trip blank (TB) included for VOC analyses?		No			
	non-VOC samples collected in the correct containers?	collocted?	No Voc			
	e appropriate volume/weight or number of sample containers	confected?	Yes			
Field La	<b>then</b> e field sample labels filled out with the minimum information of the same of the sa	ation				
	Sample ID?		Yes			
I	Date/Time Collected?		Yes			
(	Collectors name?		Yes			
-	Preservation					
	s the COC or field labels indicate the samples were prese	rved?	Yes			
	sample(s) correctly preserved?		Yes			
24. Is lat	b filteration required and/or requested for dissolved meta	ls?	Yes			
	ase Sample Matrix					
	s the sample have more than one phase, i.e., multiphase?		No			
27. If ye	s, does the COC specify which phase(s) is to be analyzed	!?	NA			
	tract Laboratory					
28 Ares	samples required to get sent to a subcontract laboratory?		No			
20.110						

Date



Released to Imaging: 2/17/2025 2:02:20 PM





5796 U.S. Hwy 64 Farmington, NM 87401

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





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**Practical Solutions for a Better Tomorrow** 

## **Analytical Report**

WPX Energy - Carlsbad

Project Name:

North Brushy PW Line

Work Order: E308027

Job Number: 01058-0007

Received: 8/4/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 8/11/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 8/11/23

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220

Project Name: North Brushy PW Line Workorder: E308027 Date Received: 8/4/2023 8:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 8/4/2023 8:00:00AM, under the Project Name: North Brushy PW Line.

The analytical test results summarized in this report with the Project Name: North Brushy PW Line 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.

**Raina Schwanz** 

Laboratory Administrator

rainaschwanz@envirotech-inc.com

Office: 505-632-1881

Respectfully,

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**Alexa Michaels** 

Sample Custody Officer

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#### **Sample Summary**

		Sample Sum	mary		
WPX Energy - Carlsbad		Project Name:	North Brushy PW	Line	Reported:
5315 Buena Vista Dr		Project Number:	ber: 01058-0007		in porteu.
Carlsbad NM, 88220		Project Manager:	Gilbert Moreno		08/11/23 10:28
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH22	E308027-01A	Aqueous	08/03/23	08/04/23	Poly 500mL
	E308027-01B	Aqueous	08/03/23	08/04/23	Poly 500mL
	E308027-01C	Aqueous	08/03/23	08/04/23	VOA Vial, 40mL; HCl
	E308027-01D	Aqueous	08/03/23	08/04/23	VOA Vial, 40mL; HCl
	E308027-01E	Aqueous	08/03/23	08/04/23	VOA Vial, 40mL; HCl



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WPX Energy - Carlsbad	Project Name:	Nort	n Brushy PW Lii	ne				
5315 Buena Vista Dr	Project Number:	0105	8-0007			Reported:		
Carlsbad NM, 88220	Project Manager	: Gilbo	ert Moreno			8/11/2023 10:28:36AM		
		BH22						
	E	308027-01						
		Reporting						
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes		
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analy	st: KF		Batch: 2332019		
Total Dissolved Solids	1560	10.0	1	08/07/23	08/07/23			
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analy	st: BA		Batch: 2332024		
рН @25°С	7.51		1	08/08/23 08:24	08/08/23 10:31	Н5		
Wet Chemistry by SM2320B	mg/L	mg/L	Analy	st: KH		Batch: 2332057		
Total Alkalinity (as CaCO3 at pH 4.5)	494	10.0	1	08/09/23	08/10/23			
Wet Chemistry by 9050A/2510B	uS/cm	uS/cm	Analy	st: KF		Batch: 2332033		
Specific Conductance (@ 25 C)	2800	10.0	1	08/08/23	08/08/23			
Volatile Organics by EPA 8021B	ug/L	ug/L	Analy	st: IY		Batch: 2332036		
Benzene	ND	1.00	1	08/08/23	08/08/23			
Ethylbenzene	ND	1.00	1	08/08/23	08/08/23			
Toluene	ND	1.00	1	08/08/23	08/08/23			
o-Xylene	ND	1.00	1	08/08/23	08/08/23			
p,m-Xylene	ND	2.00	1	08/08/23	08/08/23			
Total Xylenes	ND	1.00	1	08/08/23	08/08/23			
Surrogate: 4-Bromochlorobenzene-PID	90	8.4 %	70-130	08/08/23	08/08/23			
Dissolved Metals by EPA 6010C	mg/L	mg/L	Analy	st: JL		Batch: 2332025		
Calcium	9090	100	100	08/08/23	08/08/23			
Iron	613	200	100	08/08/23	08/08/23			
Magnesium	300	100	100	08/08/23	08/08/23			
Potassium	ND	100	100	08/08/23	08/08/23			
Sodium	372	200	100	08/08/23	08/08/23			
Sodium Absorption Ratio (CALC)	1.05		1	08/10/23	08/10/23			

## Sample Data



## Sample Data

		L					
WPX Energy - Carlsbad	Project Name:	North	Brushy PW Lir	ne			
5315 Buena Vista Dr	Project Number:	01058	-0007		Reported:		
Carlsbad NM, 88220	Project Manager:	Gilber	t Moreno		8/11/2023 10:28:36A		
	B	BH22					
	E30	8027-01					
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Anions by EPA 300.0/9056A	mg/L	mg/L	Analys	st: BA		Batch: 2331091	
luoride	4.30	1.25	5	08/04/23	08/08/23		
Chloride	591	10.0	5	08/04/23	08/08/23		
litrite-N	ND	1.25	5	08/04/23 14:14	08/08/23 11:19	G1	
Jitrate-N	27.2	1.25	5	08/04/23 14:14	08/08/23 11:19	G1	
-Phosphate-P	ND	1.25	5	08/04/23 14:14	08/08/23 11:19	G1	
ulfate	73.7	10.0	5	08/04/23	08/08/23		



## **QC Summary Data**

		<u> </u>		v					
WPX Energy - Carlsbad		Project Name:	Ν	North Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:	0	1058-0007					
Carlsbad NM, 88220		Project Manager	:: C	ilbert Moreno					8/11/2023 10:28:36AM
		Wet Chem/	Gravime	tric by SM2	2540C				Analyst: KF
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2332019-BLK1)							Prepared: 0	8/07/23 Ai	nalyzed: 08/07/23
Total Dissolved Solids	ND	10.0							
LCS (2332019-BS1)							Prepared: 0	8/07/23 A	nalyzed: 08/07/23
Total Dissolved Solids	101	10.0	100		101	55-134			
Duplicate (2332019-DUP1)				Source:	E308026-	01	Prepared: 0	8/07/23 A	nalyzed: 08/07/23
Total Dissolved Solids	3220	10.0		3350			4.05	5	



## **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number	r: (	North Brushy P 1058-0007					<b>Reported:</b> 8/11/2023 10:28:36AM
Carlsbad NM, 88220		Project Manage Wet Chem		Filbert Moreno					Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	pH Units	pH Units	pH Units	pH Units	%	%	%	%	Notes
LCS (2332024-BS1)							Prepared: 0	8/08/23 A1	nalyzed: 08/08/23
Н	8.06		8.00		100	98.75-101.25			
Duplicate (2332024-DUP1)				Source:	E308026	6-01	Prepared: 0	8/08/23 Ai	nalyzed: 08/08/23
Н	7.37			7.37			0.00	20	



## **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number Project Manager	: (	North Brushy P 11058-0007 Gilbert Moreno				ş	<b>Reported:</b> 8/11/2023 10:28:36AM
		Wet Ch	emistry	by SM2320	В				Analyst: KH
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
LCS (2332057-BS1)							Prepared: 0	8/09/23 A1	nalyzed: 08/10/23
Total Alkalinity (as CaCO3 at pH 4.5)	256	10.0	250		102	70-130			
Duplicate (2332057-DUP1)				Source:	E307105-	01	Prepared: 0	8/09/23 Ai	nalyzed: 08/10/23
Total Alkalinity (as CaCO3 at pH 4.5)	77.0	10.0		79.0			2.56	20	



## **QC Summary Data**

				•					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		orth Brushy P 1058-0007	W Line				Reported:
Carlsbad NM, 88220		Project Manager				8	/11/2023 10:28:36AM		
		Wet Chen	nistry by	9050A/251	0B				Analyst: KF
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	Notes
Blank (2332033-BLK1)							Prepared: 0	8/08/23 An	alyzed: 08/08/23
Specific Conductance (@ 25 C)	ND	10.0							
LCS (2332033-BS1)							Prepared: 0	8/08/23 An	alyzed: 08/08/23
Specific Conductance (@ 25 C)	1410	10.0	1410		100	98-102			
Duplicate (2332033-DUP1)				Source:	E308026-	01	Prepared: 0	8/08/23 An	alyzed: 08/08/23
Specific Conductance (@ 25 C)	5080	10.0		5090			0.197	20	



## **QC Summary Data**

		<u> </u>							
WPX Energy - Carlsbad		Project Name:	1	North Brushy P	W Line				Reported:
5315 Buena Vista Dr		Project Number:	(	01058-0007					
Carlsbad NM, 88220		Project Manager:	(	Gilbert Moreno					8/11/2023 10:28:36AN
		Volatile O	rganics	by EPA 802	21B				Analyst: IY
			0	•					Anaryst. 11
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	Notes
Blank (2332036-BLK1)							Prepared: 0	8/09/23 A	nalyzed: 08/09/23
Benzene	ND	1.00							
Ethylbenzene	ND	1.00							
Toluene	ND	1.00							
o-Xylene	ND	1.00							
p,m-Xylene	ND	2.00							
Total Xylenes	ND	1.00							
Surrogate: 4-Bromochlorobenzene-PID	154		160		96.5	70-130			
LCS (2332036-BS1)							Prepared: 0	8/08/23 A	nalyzed: 08/08/23
Benzene	96.1	1.00	100		96.1	70-130			
Ethylbenzene	93.2	1.00	100		93.2	70-130			
Foluene	96.4	1.00	100		96.4	70-130			
p-Xylene	96.4	1.00	100		96.4	70-130			
p,m-Xylene	193	2.00	200		96.5	70-130			
Total Xylenes	289	1.00	300		96.4	70-130			
Surrogate: 4-Bromochlorobenzene-PID	155		160		97.0	70-130			
Matrix Spike (2332036-MS1)				Source:	E308026-	01	Prepared: 0	8/08/23 A	nalyzed: 08/08/23
Benzene	462	5.00	500	ND	92.4	54-133			
Ethylbenzene	449	5.00	500	ND	89.7	61-133			
Toluene	464	5.00	500	ND	92.8	61-130			
p-Xylene	467	5.00	500	ND	93.4	63-131			
p,m-Xylene	930	10.0	1000	ND	93.0	63-131			
Total Xylenes	1400	5.00	1500	ND	93.1	63-131			
Surrogate: 4-Bromochlorobenzene-PID	780		800		97.6	70-130			
Matrix Spike Dup (2332036-MSD1)				Source:	E308026-	01	Prepared: 0	8/08/23 A	nalyzed: 08/08/23
Benzene	477	5.00	500	ND	95.5	54-133	3.26	20	
Ethylbenzene	463	5.00	500	ND	92.6	61-133	3.10	20	
Toluene	479	5.00	500	ND	95.8	61-130	3.21	20	
o-Xylene	480	5.00	500	ND	96.1	63-131	2.85	20	
p,m-Xylene	959	10.0	1000	ND	95.9	63-131	3.03	20	
Total Xylenes	1440	5.00	1500	ND	95.9	63-131	2.97	20	
Surrogate: 4-Bromochlorobenzene-PID	778		800		97.2	70-130			



## **QC Summary Data**

		<b>X C D</b>		ary Dat	••				
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	Iorth Brushy P 1058-0007 Gilbert Moreno					<b>Reported:</b> 8/11/2023 10:28:36AM
		Dissolved	Metals	by EPA 601	0C				Analyst: JL
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2332025-BLK1)							Prepared: 0	8/08/23 A	Analyzed: 08/08/23
Calcium	ND	1.00							
ron	ND	2.00							
Magnesium	ND	1.00							
otassium	ND	1.00							
Godium	ND	2.00							
LCS (2332025-BS1)							Prepared: 0	8/08/23 A	Analyzed: 08/08/23
Calcium	51.4	1.00	50.0		103	80-120			
ron	103	2.00	100		103	80-120			
/lagnesium	52.6	1.00	50.0		105	80-120			
Potassium	5.13	1.00	5.00		103	80-120			
lodium	19.1	2.00	20.0		95.3	80-120			
Matrix Spike (2332025-MS1)				Source:	E308026-	01	Prepared: 0	8/08/23 A	Analyzed: 08/08/23
Calcium	6970	20.0	50.0	6560	812	75-125			M4
ron	617	40.0	100	503	114	75-125			
Agnesium	351	20.0	50.0	303	96.4	75-125			
otassium	62.1	20.0	5.00	55.2	139	75-125			M4
Sodium	354	40.0	20.0	341	62.0	75-125			M4
Matrix Spike Dup (2332025-MSD1)				Source:	E308026-	01	Prepared: 0	8/08/23 A	Analyzed: 08/08/23
Calcium	7250	20.0	50.0	6560	NR	75-125	3.99	20	M4
ron	571	40.0	100	503	68.2	75-125	7.74	20	M2
Magnesium	359	20.0	50.0	303	112	75-125	2.25	20	
otassium	59.0	20.0	5.00	55.2	76.0	75-125	5.19	20	
Sodium	375	40.0	20.0	341	168	75-125	5.82	20	M4



## **QC Summary Data**

		$\mathbf{t} \in \mathcal{S}$		ary Data					
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	North Brushy PV 01058-0007 Gilbert Moreno	V Line				<b>Reported:</b> 8/11/2023 10:28:36AM
		Anions b	oy EPA	300.0/9056A					Analyst: BA
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	Notes
Blank (2331091-BLK1)							Prepared: 08	3/04/23 A	nalyzed: 08/08/23
Fluoride	ND	0.250							
Chloride	ND	2.00							
Nitrite-N	ND	0.250							
Nitrate-N	ND	0.250							
p-Phosphate-P	ND	0.250							
Sulfate	ND	2.00							
LCS (2331091-BS1)							Prepared: 08	3/04/23 A	nalyzed: 08/08/23
Fluoride	2.59	0.250	2.50		104	90-110			
Chloride	24.3	2.00	25.0		97.2	90-110			
Nitrite-N	2.58	0.250	2.50		103	90-110			
Nitrate-N	2.50	0.250	2.50		100	90-110			
p-Phosphate-P	12.3	0.250	12.5		98.2	90-110			
Sulfate	24.3	2.00	25.0		97.4	90-110			
LCS Dup (2331091-BSD1)							Prepared: 08	3/04/23 A	nalyzed: 08/08/23
Fluoride	2.59	0.250	2.50		104	90-110	0.0579	20	
Chloride	24.3	2.00	25.0		97.2	90-110	0.0267	20	
Nitrite-N	2.58	0.250	2.50		103	90-110	0.233	20	
Nitrate-N	2.51	0.250	2.50		100	90-110	0.0319	20	
o-Phosphate-P	12.2	0.250	12.5		97.9	90-110	0.226	20	
Sulfate	24.3	2.00	25.0		97.4	90-110	0.00247	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.



Γ	WPX Energy - Carlsbad	Project Name:	North Brushy PW Line	
	5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
	Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	08/11/23 10:28

- G1 Samples recieved on Friday August 4th were loaded onto instrument within holding time but due to instrument failure were not ran within holding time over weekend.
- H5 pH is specified to be performed in the field within 15 minutes of sampling. The sample analysis was performed as quickly as possible.
- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- 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.



Released Project Information

Received by OCD: 4/15/2024 2:04:17 PM

	PX Energ						Bill To						se On						TA			EPA P	ogram
	North Bru					ttention: Jim Raley			Lab	WO#	-	_	l dol			-	1D	2D	3D	Stand	ard	CWA	SDWA
	lanager:					ddress: 5315 Buena	S NOR CONT		E3	080	DZ		do					1.1		5 Day	TAT		
	13000 W					City, State, Zip: Carlsbad, NM, 882							Analy	sis ar	nd Me	etho	b						RCRA
	e, Zip_Od		79765	-	P	hone: 575-885-750	2			h												1.1.1	
hone: 8	32-541-7	719			E	mail: jim.raley@dvi	n.com			ORO												State	1000
mail: De	evon-tean	n@etech	env.com		V	WBS/WO: MM-155117.AL.RNM			1	20/0	-	-		0.0		5	MN			NM	1 CO	UT AZ	TX
ollected	by: Gilbe	ert More	no		1	Incident ID: nAPP2231126594, nAPP2312845934				JO/DF	802	3260	010	300		Anie			¥	×			
Time	Date	Manada	No. of	Comple II				Lab	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0		Cation/Anion	BGDOC		S				
Sampled	Sampled	Matrix	Containers	Sample II	D			Number	Dep	H41	BTE	VOC	Met	Chlo	TDS	Cati	BGL		GDOC	1.1		Remarks	
11:00	8.3.23	A	5			BH22		1			x			X	x								
11.00	0.5.25		-	-				1			^			^	~	^				_			
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ddition	al Instruc	tions:																					
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(field sam)	oler), attest t	o the validit	y and auther	nticity of this	sample. I am a	vare that tampering with o	or intentionally mislat	pelling the sam	mple loc	cation,												hey are samp	ed or
			ed fraud and	i may be grou	unds for legal ac		by: GM					_	receive	d packe	ed in ice	e at an i	avg tem	p above	0 but le	ss than 6 °C	on subse	quent days.	
	ed by: (Sign	ature)	Date		Time	Received by: (Signat	ture)	Date 8-3-2	~	Time 13	115	-					La	b Us	e Onl	У			
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Sample Mat	ris S - Soil, S	d - Solid, Sg	- Sludge, A -	Aqueous, O	- Other	Law-	1 000	Containe	r Type	:g-g	lass,	p-p				_	er gla	ISS. V	VOA				
	and the second second second second second					s other arrangements ar	re made. Hazardo														rt for th	e analysis	of the
						poratory with this COC.												o circe					
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													1	2	3		C				F	01	- 0
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							Pa	age 15 of	16										-	100			1.1.1.2

#### **Envirotech Analytical Laboratory**

Client:	WPX Energy - Carlsbad D	ate Received:	08/04/23	08:00		Work Order ID:	E308027
Phone:	(539) 573-4018 D	ate Logged In:	08/04/23	08:41		Logged In By:	Caitlin Mars
Email:	devon-team@ensolum.com D	ue Date:	08/10/23	17:00 (4 day TAT)			
Chain of	f Custody (COC)						
1. Does t	he sample ID match the COC?		Yes				
2. Does t	he number of samples per sampling site location match	the COC	Yes				
3. Were s	samples dropped off by client or carrier?		Yes	Carrier: Con	urier		
4. Was th	ne COC complete, i.e., signatures, dates/times, requested	l analyses?	Yes				
5. Were a	all samples received within holding time? Note: Analysis, such as pH which should be conducted in th i.e, 15 minute hold time, are not included in this disucssion.	e field,	Yes			Commen	ts/Resolution
Sample '	<u>Turn Around Time (TAT)</u>			Г			
6. Did th	e COC indicate standard TAT, or Expedited TAT?		Yes				
Sample	Cooler						
	sample cooler received?		Yes				
8. If yes,	was cooler received in good condition?		Yes				
9. Was th	ne sample(s) received intact, i.e., not broken?		Yes				
10. Were	custody/security seals present?		No				
11. If yes	s, were custody/security seals intact?		NA				
12. Was tl	he sample received on ice? If yes, the recorded temp is 4°C, i.e Note: Thermal preservation is not required, if samples are re minutes of sampling		Yes				
13. If no	visible ice, record the temperature. Actual sample ter	nperature: <u>4°</u>	<u>C</u>				
Sample	<u>Container</u>						
14. Are a	equeous VOC samples present?		Yes				
	VOC samples collected in VOA Vials?		Yes				
	e head space less than 6-8 mm (pea sized or less)?		Yes				
	a trip blank (TB) included for VOC analyses?		No				
	non-VOC samples collected in the correct containers?		Yes				
	appropriate volume/weight or number of sample containers	s collected?	Yes				
Field La		<b>.</b>					
	field sample labels filled out with the minimum inform Sample ID?	ation:	Yes				
	Date/Time Collected?		Yes	L			
	Collectors name?		Yes				
_	Preservation						
21. Does	the COC or field labels indicate the samples were prese	erved?	Yes				
	sample(s) correctly preserved?		Yes				
24. Is lat	filteration required and/or requested for dissolved meta	als?	Yes				
	ase Sample Matrix						
	the sample have more than one phase, i.e., multiphase?		No				
27. If yes	s, does the COC specify which phase(s) is to be analyze	d?	NA				
Subcont	ract Laboratory						
28. Are s	samples required to get sent to a subcontract laboratory?		No				
	a subcontract laboratory specified by the client and if so	1.0	NA	Subcontract Lab: 1			

**Client Instruction** 

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



envirotech Inc.



**Environment Testing** 

# **ANALYTICAL REPORT**

## **PREPARED FOR**

Attn: Gilbert Moreno Etech Environmental & Safety Solutions PO BOX 62228 Midland, Texas 79711 Generated 10/2/2023 5:43:51 PM Revision 1

## JOB DESCRIPTION

North Brushy PW Line

## **JOB NUMBER**

890-5167-1

RT OR reno tions 2228

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information



## **Eurofins Carlsbad**

### Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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**

AMER

Generated 10/2/2023 5:43:51 PM Revision 1

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

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## **Definitions/Glossary**

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

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#### Job ID: 890-5167-1

## Qualifiers

Qualifiers	<u> </u>	3
HPLC/IC Qualifier	Qualifier Description	
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.	5
F1	MS and/or MSD recovery exceeds control limits.	J
F2	MS/MSD RPD exceeds control limits	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
U	Indicates the analyte was analyzed for but not detected.	
Metals		
Qualifier	Qualifier Description	0
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.	ð
E	Result exceeded calibration range.	9
F1	MS and/or MSD recovery exceeds control limits.	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
U	Indicates the analyte was analyzed for but not detected.	
General Ch	emistry	
Qualifier	Qualifier Description	
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Giussaiy		

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)	
		Eurofins Carlsbad

3

Job ID: 890-5167-1

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Received by OCD: 4/15/2024 2:04:17 PM

Glossary (	Glossary (Continued)					
Abbreviation	These commonly used abbreviations may or may not be present in this report.					
TEQ	Toxicity Equivalent Quotient (Dioxin)					
TNTC	Too Numerous To Count					
INIC	Ioo Numerous Io Count					

**Case Narrative** 

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line Job ID: 890-5167-1

#### Job ID: 890-5167-1

#### Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5167-1

#### REVISION

The report being provided is a revision of the original report sent on 9/15/2023. The report (revision 1) is being revised due to Per client email, lead and iron missing on some samples on final report.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/28/2023 1:56 PM. 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 5.2°C

#### HPLC/IC

Method 300\_ORGFM\_28D: The instrument blank/CCB for analytical batch 860-119245 contained Chloride greater than the reporting limit (RL), and were not reanalyzed because associated sample(s) results were greater than 10X the value found in the instrument blank/CCB. The data have been qualified and reported.

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-119245 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) recovery was within acceptance limits.

Method 300\_ORGFM\_28D: The matrix spike (MS) recoveries for analytical batch 860-119245 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300\_ORGFM\_28D: The following sample was diluted to bring the concentration of target analytes within the calibration range: BH13 (890-5167-1). Elevated reporting limits (RLs) are provided.

Method 300\_ORGFM\_28D: The instrument blank/CCB for analytical batch 860-119774 contained Chloride greater than the method detection limit (MDL), and were not reanalyzed because associated sample(s) results were greater than 10X the value found in the instrument blank/CCB. The data have been reported.

Method 300\_ORGFM\_28D: The following samples were diluted to bring the concentration of target analytes within the calibration range: BH13 (890-5167-1) and BH14 (890-5167-2). Elevated reporting limits (RLs) are provided.

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-120418 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample / laboratory control sample duplicate(LCS/LCSD) recovery was within acceptance limits.

Method 300\_ORGFMS: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-119246 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) recovery is within acceptance limits.

#### **Case Narrative**

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line Job ID: 890-5167-1

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#### Job ID: 890-5167-1 (Continued)

#### Laboratory: Eurofins Carlsbad (Continued)

Method 300\_ORGFMS: The matrix spike duplicate (MSD) recoveries for analytical batch 860-120419 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.

#### Metals

Method 200.7: Due to the high concentration of Calcium and Magnesium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 860-119461 and analytical batch 860-119617 could not be evaluated for accuracy and precision. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

Method 200.7: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-119461 and analytical batch 860-119617 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 200.7: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-119461 and analytical batch 860-119721 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 200.7: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-121166 and analytical batch 860-121465 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 200.7: Due to the high concentration of Calcium, the matrix spike (MS) for preparation batch 860-121166 and analytical batch 860-121465 could not be evaluated for accuracy. The associated laboratory control sample (LCS) met acceptance criteria.

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

#### **General Chemistry**

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

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

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Job ID: 890-5167-1

#### Lab Sample ID: 890-5167-1 Matrix: Water

09/01/23 02:08

Date Collected: 08/28/23 10:00 Date Received: 08/28/23 13:56

**Client Sample ID: BH13** 

Chloride

				Prepared	Analyzed	Dil Fac
Nitrate as N	11.9	1.00	mg/L		08/29/23 20:52	10
Nitrite as N	<1.00 l	J 1.00	mg/L		08/29/23 20:52	10
Fluoride	<5.00 l	J 5.00	mg/L		08/29/23 20:52	10
Sulfate	266	5.00	mg/L		08/29/23 20:52	10

50.0

mg/L

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	6300		25.0		mg/L		08/30/23 11:30	08/31/23 12:33	50
Potassium	73.5		0.500		mg/L		08/30/23 11:30	08/30/23 22:02	1
Calcium	2930		10.0		mg/L		08/30/23 11:30	08/30/23 22:20	50
Iron	1.16		0.200		mg/L		08/30/23 11:30	08/30/23 22:02	1
Magnesium	429		10.0		mg/L		08/30/23 11:30	08/30/23 22:20	50
Manganese	0.266		0.0200		mg/L		08/30/23 11:30	08/30/23 22:02	1
SiO2	106		1.07		mg/L		08/30/23 11:30	08/30/23 22:02	1
Lead	< 0.0100	U	0.0100		mg/L		08/30/23 11:30	08/30/23 22:02	1

13400

Analyte	Result Q	Qualifier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Са	2930	0.200	mg/L			09/01/23 13:13	1
Mg	429	0.400	mg/L			09/01/23 13:13	1
Hardness as calcium carbonate	9080	0.400	mg/L			09/01/23 13:13	1
Calcium hardness as calcium carbonate	7320	0.200	mg/L			09/01/23 13:13	1
Magnesium hardness as calcium carbonate	1770	0.400	mg/L			09/01/23 13:13	1

Genera	l Chem	istrv
Genera		i Su y

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Anion/Cation Balance (SM 1030E)	7.74			%			08/30/23 19:38	1
Alkalinity (SM 2320B)	191		4.00	mg/L			09/01/23 13:03	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	mg/L			09/01/23 13:03	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	191		4.00	mg/L			09/01/23 13:03	1
Total Dissolved Solids (SM 2540C)	27400		200	mg/L			08/31/23 10:12	1
Carbon dioxide (SM 4500 CO2 D)	216		1.25	mg/L			09/01/23 17:29	1
Carbon Dioxide, Free (SM 4500 CO2 D)	48.0		0.370	mg/L			09/01/23 17:29	1
pH (SM 4500 H+ B)	6.9	HF		SU			09/01/23 18:05	1
Temperature (SM 4500 H+ B)	15.1	HF		Degree	es C		09/01/23 18:05	1

#### **Client Sample ID: BH14**

Date Collected: 08/28/23 10:20 Date Received: 08/28/23 13:56

Method: EPA 300.0 - Anions, I	on Chromat	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	18.8		0.100		mg/L			08/30/23 09:38	1

**Eurofins Carlsbad** 

**Matrix: Water** 

Lab Sample ID: 890-5167-2

·5167-1

100

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**Client Sample ID: BH14** 

Date Collected: 08/28/23 10:20

#### **Client Sample Results**

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

## Lab Sample ID: 890-5167-2

Matrix: Water

Nitrite as N     3.80     0.100     mg/L     08/30/23 09:38       Fluoride     0.897     0.500     mg/L     08/30/23 09:38       Sulfate     181     0.500     mg/L     08/30/23 09:38       Method: EPA 300.0 - Anions, Ion Chromatography - DL Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     09/01/23 01:51     Dil       Chloride     7560     50.0     mg/L     D     Prepared     Analyzed     Dil       Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dil       Sodium     2290     25.0     mg/L     08/30/23 11:30     08/30/23 22:06     Dil       Calcium     1720     10.0     mg/L     08/30/23 11:30     08/30/23 22:06     Dil     Dil     Dil     08/30/23 11:30     08/30/23 22:06     Dil	Method: EPA 300.0 - Anions, Ior				MDI	11 14	~	Duran and	A seals sead	
Fluoride     0.897     0.500     mg/L     08/30/23 09:38       Suifate     181     0.500     mg/L     08/30/23 09:38       Method: EPA 300.0 - Anions, Ion Chromatography - DL Analyto     Result Qualifier     RL     MDL     Unit     D     Propared     Analyzed     Dil       Mathot     Result Qualifier     RL     MDL     Unit     D     Propared     Analyzed     Dil       Mathot     Result Qualifier     RL     MDL     Unit     D     Propared     Analyzed     Dil       Sodium     2290     25.0     mg/L     08/30/23 11:30     08/30/23 12:30     08/30/23 22:26       Calcium     1720     10.0     mg/L     08/30/23 11:30     08/30/23 22:26       Nagnesium     149     0.00     mg/L     08/30/23 11:30     08/30/23 22:26       Nagnesium     149     0.0100     mg/L     08/30/23 11:30     08/30/23 22:26       Si/2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23			Quaimer		MDL			Prepared		Dil Fac
Suffate     181     0.500     mg/L     08/30/23 09:38       Method: EPA 300.0 - Anlons, Ion Chromatography - DL Analyto     Result Qualifier     RL     MDL     Unit     D     Propared     Analyzed     Dil       Chiorde     5750     50.0     mg/L     D     Propared     Analyzed     Dil       Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable Analyte     Result Qualifier     RL     MDL     Unit     D     Propared     Analyzed     Dil       Sodium     2290     25.0     mg/L     08/30/23 11:30     08/30/23 22.06     Dil     08/30/23 11:30     08/30/23 22.06       Calcium     1720     10.0     mg/L     08/30/23 11:30     08/30/23 22.06       Manganese     0.53     0.0200     mg/L     08/30/23 11:30     08/30/23 22.06       SIO2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22.06       Method: SM 2340B - Total Hardness (as CaCO3) by calcutation     mg/L     08/30/23 11:30     08/30/23 22.06       Mathot: SM 2340B - Total Hardness (as CaCO3) by calcutation     mg/L     09/01/23 13:13     08/30/						0				
Method: EPA 300.0 - Anions, Ion Chromatography - DL Analyte     Result Qualifier     RL Biological State     MDL     Unit     D     Prepared     Analyzed     Dil       Analyte     6500     mgL     08/01/23 01:51     08/01/23 01:51     08/01/23 01:51     08/01/23 01:51     08/01/23 01:51     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 12:35     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13     08/01/23 13:13						7				
Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     DI       Chloridie     5750     500     500     mg/L     D     Prepared     Analyzed     DI       Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable Analyte     Result     Qualifer     RL     MDL     Unit     D     Prepared     Analyzed     DI       Sodium     2290     25.0     mg/L     08/30/23 11:30     08/30/23 22:06     DI       Catelum     1720     10.0     mg/L     08/30/23 11:30     08/30/23 22:06     DI       Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:06       SiO2     84.4.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       Lead     <0.0100	Suitate	181		0.500		mg/∟			00/30/23 09:30	
Chloride     5750     50.0     mg/L     09/01/23 01:51       Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable Analyte     Result Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dill       Sodium     2290     25.0     mg/L     08/30/23 11:30     08/30/23 12:25     Dill     D							_			
Method:     EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable Analyte     MDL     Unit     D     Prepared 08/30/23 11:30     Analyzed 08/30/23 12:30     Dil       Sodium     2290     25.0     mg/L     08/30/23 11:30     08/30/23 22:06     Dil       Potassium     51.6     0.500     mg/L     08/30/23 11:30     08/30/23 22:24     Dil       Calcium     1720     10.0     mg/L     08/30/23 11:30     08/30/23 22:24       Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:26       Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:06       SiO2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       Method: SM 2340B - Total Hardness (as CaCO3) by calculation     Analyzed     08/30/23 11:30     08/30/23 11:30     08/30/23 22:06       Method: SM 2340B - Total Hardness (as CaCO3) by calculation     mg/L     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 11:			Qualifier		MDL		D	Prepared	-	Dil Fa
Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     DI       Sodium     2290     25.0     mg/L     08/30/23 11:30     08/31/23 12:35     08/30/23 11:30     08/30/23 11:30     08/30/23 11:30     08/30/23 22:26       Calcium     1720     10.0     mg/L     08/30/23 11:30     08/30/23 22:26       Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:26       Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:26       SiQ2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:66       Lead     <0.0100	Chloride	5750		50.0		mg/L			09/01/23 01:51	10
Sodum     2290     25.0     mg/L     08/30/23 11:30     08/31/23 12:35       Potassium     51.6     0.500     mg/L     08/30/23 11:30     08/30/23 22:06       Calcium     1720     10.0     mg/L     08/30/23 11:30     08/30/23 22:06       Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:06       Magnese     0.533     0.0200     mg/L     08/30/23 11:30     08/30/23 22:06       SiQ2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       SiQ2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       Method: SM 2340B - Total Hardness (as CaCO3) by calculation     Analyte     08/30/23 11:30     08/30/23 22:06       Ca     1720     0.200     mg/L     08/30/23 11:30     08/30/23 22:06       Magnesium hardness as calcium carbonate     4910     0.400     mg/L     09/01/23 13:13     01       Calcium hardness as calcium     4290     0.200     mg/L     09/01/23 13:13     01       Magnesium hardness as calcium     4290     0.20		· · · ·								
Potassium     51.6     0.500     mg/L     08/30/23 11:30     08/30/23 22:06       Calcium     1720     10.0     mg/L     08/30/23 11:30     08/30/23 22:24       Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:24       Mangenese     0.533     0.0200     mg/L     08/30/23 11:30     08/30/23 22:26       SiQ2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       Lead     <0.0100			Qualifier		MDL		_ <u>D</u>	•		Dil Fa
Calcium     1720     10.0     mg/L     08/30/23 11:30     08/30/23 22:24       Iron     4.36     0.200     mg/L     08/30/23 11:30     08/30/23 22:26       Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:26       Manganese     0.533     0.0200     mg/L     08/30/23 11:30     08/30/23 22:26       SIO2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       Method:     SM 2340B - Total Hardness (as CaCO3) by calculation     mg/L     08/30/23 11:30     08/30/23 11:30     08/30/23 12:30       Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dill       Ga     1720     0.200     mg/L     09/01/23 13:13     09/01/23 13:13     Ga/30/23 13:13     Ga/30/23 13:13     09/01/23 13:13       Galcium hardness as calcium carbonate     4910     0.400     mg/L     09/01/23 13:13     09/01/23 13:13       Galcium hardness as calcium carbonate     614     0.400     mg/L     09/01/23 13:13     08/30/23 11:20     09/01/23 13:13						-				50
Iron     4.36     0.200     mg/L     08/30/23 11:30     08/30/23 22:06       Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:06       SiO2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       SiO2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       Method:     SM 2340B - Total Hardness (as CaCO3) by calculation     mg/L     08/30/23 11:30     08/30/23 22:06       Method:     SM 2340B - Total Hardness (as CaCO3) by calculation     mg/L     08/30/23 11:30     08/30/23 12:37       Magnesium     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dil       Ga     1720     0.200     mg/L     09/01/23 13:13     O9/01/23 13:13     Dil       Galcium hardness as calcium carbonate     4910     0.400     mg/L     09/01/23 13:13     Dil       Galcium hardness as calcium     614     0.400     mg/L     09/01/23 13:13     Dil       Kallonity (SM 2320B)     219     4.00     mg/L     08/30/23 19:3						-				
Magnesium     149     10.0     mg/L     08/30/23 11:30     08/30/23 22:24       Manganese     0.533     0.0200     mg/L     08/30/23 11:30     08/30/23 22:06       SIO2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       Lead     <0.0100	Calcium									50
Marganese     0.533     0.0200     mg/L     08/30/23 11:30     08/30/23 22:06       SiO2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       Lead     <0.0100	Iron	4.36		0.200		mg/L		08/30/23 11:30		
SiO2     84.5     1.07     mg/L     08/30/23 11:30     08/30/23 22:06       Lead     <0.0100	Magnesium			10.0		mg/L		08/30/23 11:30		50
Lead     <0.0100     U     0.0100     mg/L     08/30/23 11:30     08/30/23 22:06       Method: SM 2340B - Total Hardness (as CaCO3) by calculation     mg/L     D     Prepared     Analyzed     Dill       Ca     1720     0.200     mg/L     D     Prepared     Analyzed     Dill       Mg     149     0.400     mg/L     09/01/23 13:13     Dill       Marchness as calcium carbonate     4910     0.400     mg/L     09/01/23 13:13       Calcium hardness as calcium     4290     0.200     mg/L     09/01/23 13:13       General Chemistry     Analyzed     Bill     Outit     D     Prepared     Analyzed     Dill       Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dill       Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dill       Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed	Manganese	0.533		0.0200		mg/L		08/30/23 11:30		
Method: SM 2340B - Total Hardness (as CaCO3) by calculation Analyte     MDL     Unit     D     Prepared     Analyzed 09/01/23 13:13     Dil       Ca     1720     0.200     mg/L     09/01/23 13:13     Dil     Dil     09/01/23 13:13     Dil       Mg     149     0.400     mg/L     09/01/23 13:13     09/01/23 13:13     Dil       Carbonate     4910     0.400     mg/L     09/01/23 13:13     09/01/23 13:13       Carbonate     4290     0.200     mg/L     09/01/23 13:13     09/01/23 13:13       General Chemistry     Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dil       AniorCation Balance (SM 1030E)     6.48     %     08/30/23 19:36     Dil     09/01/23 13:12     Dil	SiO2	84.5		1.07		mg/L		08/30/23 11:30	08/30/23 22:06	
Analyte     Result     Qualifier     RL     MDL     Unit     Prepared     Analyzed     Dil       Ga     1720     0.200     mg/L     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23	Lead	<0.0100	U	0.0100		mg/L		08/30/23 11:30	08/30/23 22:06	
Analyte     Result     Qualifier     RL     MDL     Unit     Prepared     Analyzed     Dil       Ga     1720     0.200     mg/L     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:13     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23 13:12     09/01/23	Method: SM 2340B - Total Hardi	ness (as C	aCO3) by	calculation						
Mg     149     0.400     mg/L     09/01/23 13:13       Hardness as calcium carbonate     4910     0.400     mg/L     09/01/23 13:13       Calcium hardness as calcium     4290     0.200     mg/L     09/01/23 13:13       Magnesium hardness as calcium     614     0.400     mg/L     09/01/23 13:13       Magnesium hardness as calcium     614     0.400     mg/L     09/01/23 13:13       General Chemistry     Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dil       Anion/Cation Balance (SM 1030E)     6.48     %     08/30/23 19:38     Dil     Og/01/23 13:12     Dil       Aniality (SM 2320B)     219     4.00     mg/L     09/01/23 13:12     Ug/01/23 13:12     Og/01/23 13:12     Carbonate Alkalinity as CaCO3 (SM     <4.00 U		•			MDL	Unit	D	Prepared	Analyzed	Dil Fa
Hardness as calcium carbonate   4910   0.400   mg/L   09/01/23 13:13     Calcium hardness as calcium   4290   0.200   mg/L   09/01/23 13:13     Calcium hardness as calcium   614   0.400   mg/L   09/01/23 13:13     General Chemistry   614   0.400   mg/L   09/01/23 13:13     General Chemistry   Anion/Cation Balance (SM 1030E)   6.48   %   08/30/23 19:38     Alkalinity (SM 2320B)   219   4.00   mg/L   09/01/23 13:12     Carbonate Alkalinity as CaCO3 (SM   <4.00	Ca	1720		0.200		mg/L			09/01/23 13:13	
Calcium hardness as calcium     4290     0.200     mg/L     09/01/23 13:13       Magnesium hardness as calcium carbonate     614     0.400     mg/L     09/01/23 13:13       General Chemistry     Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dil       Anion/Cation Balance (SM 1030E)     6.48     %     08/30/23 19:38     Dil     Dil     09/01/23 13:12     Dil     Carbonate Alkalinity as CaCO3 (SM     <4.00	Mg	149		0.400		mg/L			09/01/23 13:13	
Carbonate     Magnesium hardness as calcium     614     0.400     mg/L     09/01/23 13:13       General Chemistry     Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dil       Anion/Cation Balance (SM 1030E)     6.48     %     08/30/23 19:38     Dil       Alkalinity (SM 2320B)     219     4.00     mg/L     09/01/23 13:12     Carbonate Alkalinity as CaCO3 (SM     <4.00     U     4.00     mg/L     09/01/23 13:12     Dil       Carbonate Alkalinity as CaCO3 (SM     <4.00	Hardness as calcium carbonate	4910		0.400		mg/L			09/01/23 13:13	
Magnesium hardness as calcium carbonate     614     0.400     mg/L     09/01/23 13:13       General Chemistry Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dil       Anion/Cation Balance (SM 1030E)     6.48     %     %     08/30/23 19:38     Dil       Alkalinity (SM 2320B)     219     4.00     mg/L     09/01/23 13:12     09/01/23 13:12       Carbonate Alkalinity as CaCO3 (SM     <4.00		4290		0.200		mg/L			09/01/23 13:13	
Analyte     Result     Qualifier     RL     MDL     Unit     D     Prepared     Analyzed     Dil       Anion/Cation Balance (SM 1030E)     6.48	Magnesium hardness as calcium	614		0.400		mg/L			09/01/23 13:13	
Anion/Cation Balance (SM 1030E)     6.48     %     08/30/23 19:38       Alkalinity (SM 2320B)     219     4.00     mg/L     09/01/23 13:12       Carbonate Alkalinity as CaCO3 (SM     <4.00     U     4.00     mg/L     09/01/23 13:12       2320B)     Bicarbonate Alkalinity as CaCO3     219     4.00     mg/L     09/01/23 13:12       GSM 2320B)     Carbon ate Alkalinity as CaCO3     219     4.00     mg/L     09/01/23 13:12       Carbon ate Alkalinity as CaCO3     219     4.00     mg/L     09/01/23 13:12       (SM 2320B)     Total Dissolved Solids (SM 2540C)     13200     100     mg/L     08/31/23 10:12       Carbon dioxide (SM 4500 CO2 D)     236     1.25     mg/L     09/01/23 17:29       Carbon Dioxide, Free (SM 4500     43.7     0.370     mg/L     09/01/23 17:29       CO2 D)     PH (SM 4500 H+ B)     7.0 HF     SU     09/01/23 18:08       Temperature (SM 4500 H+ B)     15.3 HF     Degrees C     09/01/23 18:08       Client Sample ID: BH18     Lab Sample ID: 890-5167       Oate Received: 08/28/23 10:40     Matrix: Wa <	General Chemistry									
Alkalinity (SM 2320B)   219   4.00   mg/L   09/01/23 13:12     Carbonate Alkalinity as CaCO3 (SM   <4.00		Result	Qualifier	RL	MDL		D	Prepared		Dil Fa
Carbonate Alkalinity as CaCO3 (SM   <4.00	Anion/Cation Balance (SM 1030E)					%			08/30/23 19:38	
2320B)   Bicarbonate Alkalinity as CaCO3   219   4.00   mg/L   09/01/23 13:12     (SM 2320B)   Total Dissolved Solids (SM 2540C)   13200   100   mg/L   08/31/23 10:12     Carbon dioxide (SM 4500 CO2 D)   236   1.25   mg/L   09/01/23 17:29     Carbon Dioxide, Free (SM 4500   43.7   0.370   mg/L   09/01/23 17:29     CO2 D)   7.0   HF   SU   09/01/23 18:08     Temperature (SM 4500 H+ B)   7.0   HF   Degrees C   09/01/23 18:08     Client Sample ID: BH18   Lab Sample ID: 890-5165   Matrix: Wath the state of t		219		4.00		mg/L			09/01/23 13:12	
(SM 2320B)   Total Dissolved Solids (SM 2540C)   13200   100   mg/L   08/31/23 10:12     Carbon dioxide (SM 4500 CO2 D)   236   1.25   mg/L   09/01/23 17:29     Carbon Dioxide, Free (SM 4500   43.7   0.370   mg/L   09/01/23 17:29     Co2 D)   PH (SM 4500 H+ B)   7.0 HF   SU   09/01/23 18:08     Temperature (SM 4500 H+ B)   15.3 HF   Degrees C   09/01/23 18:08     Client Sample ID: BH18   Lab Sample ID: 890-5167   Matrix: Wa     Date Collected: 08/28/23 10:40   Matrix: Wa     Date Received: 08/28/23 13:56   Matrix: Wa	,	<4.00	U	4.00		mg/L			09/01/23 13:12	
Carbon dioxide (SM 4500 CO2 D)   236   1.25   mg/L   09/01/23 17:29     Carbon Dioxide, Free (SM 4500   43.7   0.370   mg/L   09/01/23 17:29     CO2 D)   pH (SM 4500 H+ B)   7.0   HF   SU   09/01/23 18:08     Temperature (SM 4500 H+ B)   15.3   HF   Degrees C   09/01/23 18:08     Client Sample ID: BH18   Lab Sample ID: 890-5167   Matrix: Wa     Date Collected: 08/28/23 10:40   Matrix: Wa     Method: EPA 300.0 - Anions, Ion Chromatography		219		4.00		mg/L			09/01/23 13:12	
Carbon Dioxide, Free (SM 4500     43.7     0.370     mg/L     09/01/23 17:29       CO2 D) pH (SM 4500 H+ B)     7.0 HF     SU     09/01/23 18:08       Temperature (SM 4500 H+ B)     15.3 HF     Degrees C     09/01/23 18:08       Client Sample ID: BH18     Lab Sample ID: 890-5167     Matrix: Wa       Date Collected: 08/28/23 10:40     Matrix: Wa       Date Received: 08/28/23 13:56     Matrix: Wa		13200		100		mg/L			08/31/23 10:12	
CO2 D)   pH (SM 4500 H+ B)   7.0 HF   SU   09/01/23 18:08     Temperature (SM 4500 H+ B)   15.3 HF   Degrees C   09/01/23 18:08     Client Sample ID: BH18   Lab Sample ID: 890-5167     Date Collected: 08/28/23 10:40   Matrix: Wa     Date Received: 08/28/23 13:56   Matrix: Wa	Carbon dioxide (SM 4500 CO2 D)	236		1.25		mg/L			09/01/23 17:29	
pH (SM 4500 H+ B)   7.0 HF   SU   09/01/23 18:08     Temperature (SM 4500 H+ B)   15.3 HF   Degrees C   09/01/23 18:08     Client Sample ID: BH18   Lab Sample ID: 890-5167   Matrix: Wa     Date Collected: 08/28/23 10:40   Matrix: Wa     Date Received: 08/28/23 13:56   Matrix: Wa		43.7		0.370		mg/L			09/01/23 17:29	
Client Sample ID: BH18   Lab Sample ID: 890-5167     Date Collected: 08/28/23 10:40   Matrix: Wa     Date Received: 08/28/23 13:56   Matrix: Wa     Method: EPA 300.0 - Anions, Ion Chromatography   Matrix: Wa		7.0	HF			SU			09/01/23 18:08	
Date Collected: 08/28/23 10:40   Matrix: Wa     Date Received: 08/28/23 13:56   Matrix: Wa     Method: EPA 300.0 - Anions, Ion Chromatography   Matrix: Wa	Temperature (SM 4500 H+ B)	15.3	HF			Degrees C			09/01/23 18:08	
ate Collected: 08/28/23 10:40   Matrix: Wa     bate Received: 08/28/23 13:56   Matrix: Wa     Method: EPA 300.0 - Anions, Ion Chromatography   Matrix: Wa	lient Sample ID: BH18							Lab Samp	le ID: 890-5	5167-3
	ate Collected: 08/28/23 10:40									

Methou. LFA JUU.U - An	ons, ion onionatography						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	16.6	0.100	mg/L			08/30/23 09:47	1
Nitrite as N	1.60	0.100	mg/L			08/30/23 09:47	1

**Eurofins Carlsbad** 

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

#### **Client Sample ID: BH18** Date Collected: 08/28/23 10:40 Date Received: 08/28/23 13:56

Method: EPA 300.0 - Anions, Ion Chromatography (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	80.3		0.500		mg/L			08/30/23 09:47	1
Fluoride	2.23		0.500		mg/L			08/30/23 09:47	1
Sulfate	54.2		0.500		mg/L			08/30/23 09:47	1

Method: EPA 200.7 Rev	v 4.4 - Metals (ICP)	- Dissolved	k						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	119		0.500		mg/L		09/12/23 10:30	09/13/23 13:22	1
Potassium	2.26		0.500		mg/L		09/12/23 10:30	09/13/23 13:22	1
SiO2	65.3		1.07		mg/L		09/12/23 10:30	09/13/23 13:22	1
Calcium	98.5		10.0		mg/L		09/12/23 10:30	09/13/23 13:32	50
Magnesium	8.36		0.200		mg/L		09/12/23 10:30	09/13/23 13:22	1
Lead	<0.0100	U	0.0100		mg/L		09/12/23 10:30	09/13/23 13:22	1
Manganese	0.0225		0.0200		mg/L		09/12/23 10:30	09/13/23 13:22	1
Iron	<0.200	U	0.200		mg/L		09/12/23 10:30	09/13/23 13:22	1

Method: SM 2340B - Total Hardness	(as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Ca	975		0.200		mg/L			09/01/23 13:13	1	
Mg	16.4		0.400		mg/L			09/01/23 13:13	1	
Hardness as calcium carbonate	2500		0.400		mg/L			09/01/23 13:13	1	
Calcium hardness as calcium carbonate	2430		0.200		mg/L			09/01/23 13:13	1	
Magnesium hardness as calcium carbonate	67.5		0.400		mg/L			09/01/23 13:13	1	

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anion/Cation Balance (SM 1030E)	-9.37				%			08/30/23 19:38	1
Alkalinity (SM 2320B)	305		4.00		mg/L			09/01/23 13:29	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00		mg/L			09/01/23 13:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	305		4.00		mg/L			09/01/23 13:29	1
Total Dissolved Solids (SM 2540C)	635		10.0		mg/L			08/31/23 10:12	1
Carbon dioxide (SM 4500 CO2 D)	277		1.25		mg/L			09/01/23 17:29	1
Carbon Dioxide, Free (SM 4500 CO2 D)	9.61		0.370		mg/L			09/01/23 17:29	1
pH (SM 4500 H+ B)	7.8	HF			SU			09/01/23 18:09	1
Temperature (SM 4500 H+ B)	14.9	HF			Degrees C			09/01/23 18:09	1

## **Client Sample ID: BH19**

Date Collected: 08/28/23 11:00 Date Received: 08/28/23 13:56

Method: EPA 300.0 - Anions, Ion Chromatography										
Analyte	Result (	Qualifier I	L MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Nitrate as N	5.60	0.1	00	mg/L			08/30/23 09:55	1		
Nitrite as N	0.613	0.1	0	mg/L			08/30/23 09:55	1		
Chloride	178	0.5	0	mg/L			08/30/23 09:55	1		
Fluoride	4.13	0.5	0	mg/L			08/30/23 09:55	1		
Sulfate	554	5.	0	mg/L			08/30/23 12:27	10		

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**Matrix: Water** 

Lab Sample ID: 890-5167-4

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Job ID: 890-5167-1

## Lab Sample ID: 890-5167-3

Matrix: Water

5

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Job ID: 890-5167-1

## Lab Sample ID: 890-5167-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	5
Sodium	238		25.0		mg/L		09/12/23 10:30	09/13/23 13:36	50	
Potassium	1.71		0.500		mg/L		09/12/23 10:30	09/13/23 13:25	1	
SiO2	111		1.07		mg/L		09/12/23 10:30	09/13/23 13:25	1	
Calcium	194		10.0		mg/L		09/12/23 10:30	09/13/23 13:36	50	
Magnesium	61.8		0.200		mg/L		09/12/23 10:30	09/13/23 13:25	1	
Lead	<0.0100	U	0.0100		mg/L		09/12/23 10:30	09/13/23 13:25	1	8
Manganese	<0.0200	U	0.0200		mg/L		09/12/23 10:30	09/13/23 13:25	1	0
Iron	<0.200	U	0.200		mg/L		09/12/23 10:30	09/13/23 13:25	1	9
Method: SM 2340B - Total Hard	lness (as C	aCO3) by o	calculation							4.0
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Са	830		0.200		mg/L			09/01/23 13:13	1	
Mg	75.0		0.400		mg/L			09/01/23 13:13	1	
Hardness as calcium carbonate	2380		0.400		mg/L			09/01/23 13:13	1	

Hardness as calcium carbonate	2380	0.400	mg/L	09/01/23 13:13	1
Calcium hardness as calcium	2070	0.200	mg/L	09/01/23 13:13	1
carbonate Magnesium hardness as calcium carbonate	309	0.400	mg/L	09/01/23 13:13	1

General	Chemistry
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Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Anion/Cation Balance (SM 1030E)	-5.63			%			08/30/23 19:38	1
Alkalinity (SM 2320B)	363		4.00	mg/L			09/01/23 13:38	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00	mg/L			09/01/23 13:38	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	363		4.00	mg/L			09/01/23 13:38	1
Total Dissolved Solids (SM 2540C)	1770		20.0	mg/L			08/31/23 10:12	1
Carbon dioxide (SM 4500 CO2 D)	342		1.25	mg/L			09/01/23 17:29	1
Carbon Dioxide, Free (SM 4500 CO2 D)	22.9		0.370	mg/L			09/01/23 17:29	1
pH (SM 4500 H+ B)	7.5	HF		SU			09/01/23 18:12	1
Temperature (SM 4500 H+ B)	15.0	HF		Degrees	0		09/01/23 18:12	1

#### Client Sample ID: BH21

Date Collected: 08/28/23 11:20 Date Received: 08/28/23 13:56

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	20.9	0.100	mg/L			08/30/23 10:04	1
Nitrite as N	<0.100 U	0.100	mg/L			08/30/23 10:04	1
Chloride	3690	5.00	mg/L			08/30/23 12:35	10
Fluoride	1.93	0.500	mg/L			08/30/23 10:04	1
Sulfate	334	0.500	mg/L			08/30/23 10:04	1

#### Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	1180		25.0		mg/L		09/12/23 10:30	09/13/23 13:39	50
Potassium	7.68		0.500		mg/L		09/12/23 10:30	09/13/23 13:29	1
SiO2	82.6		1.07		mg/L		09/12/23 10:30	09/13/23 13:29	1
Calcium	1650		10.0		mg/L		09/12/23 10:30	09/13/23 13:39	50

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Lab Sample ID: 890-5167-5

Matrix: Water

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Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

#### Client Sample ID: BH21 Date Collected: 08/28/23 11:20 Date Received: 08/28/23 13:56

Manganese

Iron

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved (Continued)												
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed				
Magnesium	288		10.0		mg/L		09/12/23 10:30	09/13/23 13:39				
Lead	<0.0100	U	0.0100		mg/L		09/12/23 10:30	09/13/23 13:29				

0.0200

0.200

mg/L

mg/L

0.0961

<0.200 U

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Ca	2350		0.200		mg/L			09/01/23 13:13	1	
Mg	246		0.400		mg/L			09/01/23 13:13	1	
Hardness as calcium carbonate	<b>6880</b>		0.400		mg/L			09/01/23 13:13	1	
Calcium hardness as calcium carbonate	5870		0.200		mg/L			09/01/23 13:13	1	
Magnesium hardness as calcium carbonate	1010		0.400		mg/L			09/01/23 13:13	1	

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anion/Cation Balance (SM 1030E)	13.9				%			08/30/23 19:38	1
Alkalinity (SM 2320B)	189		4.00		mg/L			09/01/23 13:46	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00		mg/L			09/01/23 13:46	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	189		4.00		mg/L			09/01/23 13:46	1
Total Dissolved Solids (SM 2540C)	11200		100		mg/L			08/31/23 10:12	1
Carbon dioxide (SM 4500 CO2 D)	197		1.25		mg/L			09/01/23 17:29	1
Carbon Dioxide, Free (SM 4500 CO2 D)	30.0		0.370		mg/L			09/01/23 17:29	1
pH (SM 4500 H+ B)	7.1	HF			SU			09/01/23 18:14	1
Temperature (SM 4500 H+ B)	15.8	HF			Degrees C			09/01/23 18:14	1
Client Sample ID: BH22							Lab Sam	ole ID: 890-5	5167-6

#### Client Sample ID: BH22 Date Collected: 08/28/23 11:40

Date Received: 08/28/23 13:56

Method: EPA 300.0 - Anio	ons, Ion Chromatog	graphy					
Analyte	Result Q	ualifier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	21.1	0.100	mg/L			08/30/23 10:12	1
Nitrite as N	1.35	0.100	mg/L			08/30/23 10:12	1
Chloride	334	0.500	mg/L			08/30/23 10:12	1
Fluoride	3.26	0.500	mg/L			08/30/23 10:12	1
Sulfate	43.1	0.500	mg/L			08/30/23 10:12	1

#### Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	295		25.0		mg/L		09/12/23 10:30	09/13/23 14:04	50
Potassium	4.47		0.500		mg/L		09/12/23 10:30	09/13/23 14:01	1
SiO2	55.2		1.07		mg/L		09/12/23 10:30	09/13/23 14:01	1
Calcium	115		10.0		mg/L		09/12/23 10:30	09/13/23 14:04	50
Magnesium	10.2		0.200		mg/L		09/12/23 10:30	09/13/23 14:01	1
Lead	<0.0100	U	0.0100		mg/L		09/12/23 10:30	09/13/23 14:01	1
Manganese	0.0248		0.0200		mg/L		09/12/23 10:30	09/13/23 14:01	1
Iron	<0.200	U	0.200		mg/L		09/12/23 10:30	09/13/23 14:01	1

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Matrix: Water

Matrix: Water

Dil Fac

50

1

1

1

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Job ID: 890-5167-1

Lab Sample ID: 890-5167-5

09/12/23 10:30 09/13/23 13:29

09/12/23 10:30 09/13/23 13:29

# 1 2 3 4 5 6 7 8

10

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

#### **Client Sample ID: BH22** Date Collected: 08/28/23 11:40 Date Received: 08/28/23 13:56

Hardness as calcium carbonate

Calcium hardness as calcium

Analyte

carbonate

Ca

Mg

Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
1940		0.200		mg/L			09/01/23 13:13
25.9		0.400		mg/L			09/01/23 13:13
4950		0.400		mg/L			09/01/23 13:13
4840		0.200		mg/L			09/01/23 13:13

Magnesium hardness as calcium carbonate	107		0.400		mg/L			09/01/23 13:13	1
General Chemistry		<b>.</b>				_			
Analyte	Result	Qualifier	RL	MDL	Unit	_ <u>D</u>	Prepared	Analyzed	Dil Fac
Anion/Cation Balance (SM 1030E)	-0.0532				%			08/30/23 19:38	1
Alkalinity (SM 2320B)	281		4.00		mg/L			09/01/23 13:55	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.00	U	4.00		mg/L			09/01/23 13:55	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	281		4.00		mg/L			09/01/23 13:55	1
Total Dissolved Solids (SM 2540C)	1220		20.0		mg/L			08/31/23 10:12	1
Carbon dioxide (SM 4500 CO2 D)	255		1.25		mg/L			09/01/23 17:29	1
Carbon Dioxide, Free (SM 4500 CO2 D)	8.86		0.370		mg/L			09/01/23 17:29	1
pH (SM 4500 H+ B)	7.8	HF			SU			09/01/23 18:15	1
Temperature (SM 4500 H+ B)	16.3	HF			Degrees C			09/01/23 18:15	1

5

Matrix: Water

Dil Fac

1

1

1

1

Lab Sample ID: 890-5167-6

#### **QC Sample Results**

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Method: 300.0 - Anions, Ion Chromatography

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5 6

# Olivert Operate JD: Moth and Direct

Lab Sample ID: MB 860-119245/15	6								6	Clior	nt Sam	ple ID: Me	athod	Blan	
Matrix: Water	•										it our	Prep Typ			
Analysis Batch: 119245												I ICP IY			•
Analysis Baton. 110240	МВ	МВ													
Analyte		Qualifier		RL	М	DL Uni	t		D	Pre	epared	Analyz	ed	Dil Fa	с
Chloride	<0.500		0.5	500		mg						08/30/23			1
Fluoride	<0.500			500		mg/						08/30/23			1
Sulfate	<0.500	U	0.5	500		mg/						08/30/23 1	11:20		1
Lab Sample ID: MB 860-119245/3									(	Clier	nt Sam	ple ID: Me	ethod	Blan	k
Matrix: Water												Prep Typ			
Analysis Batch: 119245															
	МВ	МВ													
Analyte	Result	Qualifier		RL	М	DL Uni	t		D	Pre	epared	Analyz	ed	Dil Fa	с
Chloride	<0.500	U	0.5	500		mg	/L				•	08/29/23 0			1
Fluoride	<0.500	U	0.5	500		mg/						08/29/23 (	)9:42		1
Sulfate	<0.500	U	0.5	500		mg/						08/29/23 (	)9:42		1
						0									
Lab Sample ID: MB 860-119245/40 Matrix: Water									C	Clier	nt Sam	ple ID: Me Prep Typ			
Analysis Batch: 119245												1100 136			<u>ا</u> (
Analysis Daten. 110240	мв	МВ													
Analyte		Qualifier		RL	м	DL Uni	t		D	Pre	epared	Analyz	ed	Dil Fa	с
Chloride	<0.500		0.5	500		mg						08/29/23 1			1
Fluoride	<0.500			500		mg/						08/29/23 1			1
Sulfate	< 0.500			500		mg/						08/29/23 1			1
						0									
Lab Sample ID: LCS 860-119245/1	57							Clie	ent \$	Sam	ple ID	: Lab Con	trol S	ample	e
Matrix: Water												Prep Typ	be: To	tal/N/	4
Analysis Batch: 119245															
-			Spike		LCS L	.cs						%Rec			
Analyte			Added	Re	esult C	Qualifie	r U	Jnit		D	%Rec	Limits			
Chloride			10.0	g	9.571		'n	ng/L			96	90 - 110			_
Fluoride			10.0	g	9.830		n	ng/L			98	90 - 110			
Sulfate			10.0	g	9.545		n	ng/L			95	90 - 110			
Lab Sample ID: LCS 860-119245/4	1							Clie	ont s	Sam	nle ID	: Lab Con	trol S	ample	ρ
Matrix: Water												Prep Typ			
Analysis Batch: 119245												-131			
			Spike		LCS L	cs						%Rec			
Analyte			Added	Re	esult C	Qualifie	r U	Jnit		D	%Rec	Limits			
Chloride			10.0		9.777			ng/L			98	90 - 110			-
Fluoride			10.0		10.14			ng/L			101	90 - 110			
Sulfate			10.0	g	9.785		n	ng/L			98	90 - 110			
								-							
Lab Sample ID: LCSD 860-119245/	158						Clie	ent Sa	amp	ple I	D: Lab	Control S			
Matrix: Water												Prep Typ	be: 10	nai/N/	4
Analysis Batch: 119245			Omiles		00D -	000						0/ Dc -			~
Analyta			Spike		CSD L			Init		Б	0/ Dee	%Rec	000	RPI	
Analyte			Added			zuaiiiie		Jnit		D	%Rec	Limits	<b>RPD</b>		
Chloride			10.0		9.550			ng/L			95	90 - 110 00 - 110			
Fluoride			10.0		9.829		11	ng/L			98 05	90 - 110 00 - 110	0	2	

**Eurofins Carlsbad** 

0

20

Sulfate

9.545

mg/L

95

90 - 110
Г

#### **QC Sample Results**

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

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Job ID: 890-5167-1

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 860-119245/42 Matrix: Water		C	Client Sa	mple	ID: Lab	Control Prep Ty			
Analysis Batch: 119245	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	10.0	9.760		mg/L		98	90 - 110	0	20
Fluoride	10.0	10.13		mg/L		101	90 - 110	0	20
Sulfate	10.0	9.814		mg/L		98	90 - 110	0	20
Lab Sample ID: LLCS 860-119245/7				Clie	nt Sai	nple ID	: Lab Cor	ntrol Sa	ample

#### Lab Sample ID: LLCS 860-119245/7 Matrix: Water Analysis Batch: 119245

· · · · · · · · · · · · · · · · · · ·	Spike	LLCS	LLCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	 0.500	0.4720	J	mg/L		94	50 - 150	 	
Fluoride	0.500	0.4999	J	mg/L		100	50 - 150		
Sulfate	0.500	0.2606	J	mg/L		52	50 - 150		

#### Lab Sample ID: 860-56136-A-1 MS **Matrix: Water** Analysis Batch: 119245

· · ·	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Chloride	54.1	^2	10.0	61.90	4	mg/L		78	90 - 110
Fluoride	<0.500	U	10.0	10.19		mg/L		100	90 - 110
Sulfate	7.17		10.0	17.07		mg/L		99	90 - 110

#### Lab Sample ID: 860-56136-A-1 MSD Matrix: Water

Analysis Batch: 119245

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	54.1	^2	10.0	61.06	4	mg/L		69	90 - 110	1	15
Fluoride	<0.500	U	10.0	10.20		mg/L		100	90 - 110	0	15
Sulfate	7.17		10.0	17.00		mg/L		98	90 - 110	0	15

#### Lab Sample ID: 870-20135-G-1 MS Matrix: Water

Analysis Batch: 119245

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	107		10.0	115.6	4	mg/L		83	90 - 110	
Fluoride	0.585		10.0	10.58		mg/L		100	90 - 110	
Sulfate	74.7		10.0	83.68	4	mg/L		89	90 - 110	

#### Lab Sample ID: 870-20135-G-1 MSD Matrix: Water

Analysis Batch: 119245										-	
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	107		10.0	117.0	4	mg/L		98	90 - 110	1	15
Fluoride	0.585		10.0	10.66		mg/L		101	90 - 110	1	15
Sulfate	74.7		10.0	84.81	4	mg/L		101	90 - 110	1	15

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#### **Client Sample ID: Matrix Spike Prep Type: Total/NA**

**Client Sample ID: Matrix Spike** 

**Client Sample ID: Matrix Spike Duplicate** 

**Client Sample ID: Matrix Spike Duplicate** 

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Matrix: Water									C	lient Sa	mple ID: Matr Prep Type:	
Analysis Batch: 119245												
	Sample	San	nple	Spike	MS	MS					%Rec	
Analyte	Result	Qua	lifier	Added	Result	Qua	alifier	Unit	D	%Rec	Limits	
Chloride	31.3			10.0	40.63			mg/L		94	90 - 110	
Fluoride	<0.500	U		10.0	10.43			mg/L		103	90 - 110	
Sulfate	43.9			10.0	53.51	4		mg/L		96	90 - 110	
Lab Sample ID: 880-32623-I-2 Matrix: Water	MSD							Client S	amp	le ID: M	latrix Spike D Prep Type:	
Analysis Batch: 119245												
	Sample	San	nple	Spike	MSD	MSI	D				%Rec	RP
Analyte	Result	Qua	lifier	Added	Result	Qua	alifier	Unit	D	%Rec	Limits RI	PD Lim
Chloride	31.3			10.0	40.55			mg/L		93	90 - 110	0 1
Fluoride	<0.500	U		10.0	10.43			mg/L		103	90 - 110	0 1
Sulfate	43.9			10.0	53.49	4		mg/L		96	90 - 110	0 1
Lab Sample ID: MB 860-11924 Matrix: Water	6/156								Clie	ent Sam	ple ID: Metho Prep Type:	
Analysis Batch: 119246												
-		MB	МВ									
Analyte	Re	sult	Qualifier	R	<u>_</u>	MDL	Unit	D	Р	repared	Analyzed	Dil Fa
Nitrate as N	<0	.100	U	0.10	5		mg/L				08/30/23 11:20	)
Nitrite as N	<0	.100	U	0.10	C		mg/L				08/30/23 11:20	)
Lab Sample ID: MB 860-11924	6/3								Clid	ont Sam	ple ID: Metho	d Blan
Lab Sample ID. MD 000-11324	0/5											
Matrix: Water										un oum		
Matrix: Water Analysis Batch: 119246											Prep Type:	
Matrix: Water Analysis Batch: 119246		мв	мв									
Analysis Batch: 119246	Re		MB Qualifier	R	L	MDL	Unit	D			Prep Type:	Total/N
Analysis Batch: 119246 Analyte	-	esult	Qualifier	<b>R</b> 0 10		MDL	Unit mg/l	D		repared	Prep Type: Analyzed	Total/N
Analysis Batch: 119246 Analyte Nitrate as N	<0	<b>esult</b> 0.100	Qualifier U	0.10	0	MDL	mg/L	<u>D</u>			Prep Type: 	Dil Fa
Analysis Batch: 119246 Analyte	<0	esult	Qualifier U		0	MDL		<u>D</u>			Prep Type: Analyzed	Dil Fa
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N	<0 <0	<b>esult</b> 0.100	Qualifier U	0.10	0	MDL	mg/L	<u>D</u>	P	repared	Analyzed       08/29/23 09:42       08/29/23 09:42	<b>Dil Fa</b>
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924	<0 <0	<b>esult</b> 0.100	Qualifier U	0.10	0	MDL	mg/L	D	P	repared	Prep Type: <u>Analyzed</u> 08/29/23 09:42 08/29/23 09:42 ople ID: Metho	Dil Fa
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924 Matrix: Water	<0 <0	<b>esult</b> 0.100	Qualifier U	0.10	0	MDL	mg/L	<u>D</u> _	P	repared	Analyzed       08/29/23 09:42       08/29/23 09:42	Dil Fa
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924	<0 <0	9 <b>.</b> 100	Qualifier U	0.10	0	MDL	mg/L	D_	P	repared	Prep Type: <u>Analyzed</u> 08/29/23 09:42 08/29/23 09:42 ople ID: Metho	Dil Fa
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924 Matrix: Water Analysis Batch: 119246	<0 <0 6/40	esult 0.100 0.100 MB	Qualifier U U	0.10	0		mg/L mg/L		_P Clie	repared	Prep Type: <u>Analyzed</u> 08/29/23 09:42 08/29/23 09:42 09/29/23 09/23 09/29/23 09/23 09/29/23 09/23 09/29/20 09/29/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20	Dil Fa 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924 Matrix: Water Analysis Batch: 119246 Analyte	<0 <0 6/40	MB esult	Qualifier U U MB Qualifier	0.10 0.10 <b>R</b>			mg/L mg/L Unit	D	_P Clie	repared	Prep Type: <u>Analyzed</u> 08/29/23 09:42 08/29/23 09:42 09/29/23 09:42 09/29/23 09/20 09/29/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20	Dil Fa
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924 Matrix: Water Analysis Batch: 119246 Analyte Nitrate as N	<0 <0 6/40 	esult 0.100 0.100 MB	Qualifier U U MB Qualifier U	0.10			mg/L mg/L		_P Clie	repared	Prep Type: <u>Analyzed</u> 08/29/23 09:42 08/29/23 09:42 09/29/23 09/23 09/29/23 09/23 09/29/23 09/23 09/29/20 09/29/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 09/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20 00/20	Dil Fa Dil Fa Dil Fa Dil Fa
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924 Matrix: Water Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Nitrite as N Lab Sample ID: LCS 860-1192 Matrix: Water	<0 <0 6/40 	MB 2.100 MB 2.100	Qualifier U U MB Qualifier U	0.10 0.10 			mg/L mg/L Unit mg/L	D	P Clie	repared ent Sam	Prep Type: <u>Analyzed</u> 08/29/23 09:42 08/29/23 09:42 08/29/23 09:42 <b>ple ID: Metho</b> <b>Prep Type:</b> <u>Analyzed</u> 08/29/23 16:14	Dil Fa   2   Dil Fa   2   Od Blan   Total/N/   4   4   4   5   Sampl
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924 Matrix: Water Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Nitrite as N	<0 <0 6/40 	MB 2.100 MB 2.100	Qualifier U U MB Qualifier U	0.10 0.10 0.10 0.10 0.10		MDL	mg/L mg/L mg/L mg/L	D	P Clie	repared ent Sam	Prep Type: Analyzed 08/29/23 09:42 08/29/23 09:42 08/29/23 09:42 Prep Type: Analyzed 08/29/23 16:14 08/29/23 16:14 14 08/29/23 16:14 14 08/29/23 16:14	Dil Fa   2   Dil Fa   2   Od Blan   Total/N/   4   4   4   5   Sampl
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924 Matrix: Water Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: LCS 860-1192 Matrix: Water Analysis Batch: 119246	<0 <0 6/40 	MB 2.100 MB 2.100	Qualifier U U MB Qualifier U	0.10 0.10 0.10 0.10 0.10 Spike		MDL	mg/L mg/L mg/L mg/L	D	P Clie P	repared ent Sam repared	Prep Type: Analyzed 08/29/23 09:42 08/29/23 09:42 08/29/23 09:42 Prep Type: Analyzed 08/29/23 16:14 08/29/23 16:14 08	Dil Fa   2   Dil Fa   2   Od Blan   Total/N/   4   4   4   5   Sampl
Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Lab Sample ID: MB 860-11924 Matrix: Water Analysis Batch: 119246 Analyte Nitrate as N Nitrite as N Nitrite as N	<0 <0 6/40 	MB 2.100 MB 2.100	Qualifier U U MB Qualifier U	0.10 0.10 0.10 0.10 0.10		MDL LCS Qua	mg/L mg/L mg/L mg/L	D	P Clie P	repared ent Sam	Prep Type: Analyzed 08/29/23 09:42 08/29/23 09:42 08/29/23 09:42 Prep Type: Analyzed 08/29/23 16:14 08/29/23 16:14 14 08/29/23 16:14 14 08/29/23 16:14	Dil Fa   2   Dil Fa   2   Od Blan   Total/N/   4   4   4   5   Sampl

**Eurofins Carlsbad** 

LCS LCS

LCSD LCSD

Result Qualifier Unit

10.06

9.736

9.860

9.464

Result Qualifier

Unit

mg/L

mg/L

mg/L

mg/L

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Lab Sample ID: LCS 860-119246/41

Lab Sample ID: LCSD 860-119246/158

Matrix: Water

Matrix: Water

Analyte

Analyte

Nitrate as N

Nitrite as N

Nitrate as N

Nitrite as N

Analysis Batch: 119246

Analysis Batch: 119246

Method: 300.0 - Anions, Ion Chromatography (Continued)

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Prep Type: Total/NA

Prep Type: Total/NA

RPD

0

0

**Client Sample ID: Lab Control Sample** 

D %Rec

D %Rec

99

95

101

97

Client Sample ID: Lab Control Sample Dup

%Rec

Limits

80 - 120

80 - 120

%Rec

Limits

80 - 120

80 - 120

# 6

RPD

Limit

20

20

Lab Sample ID: LCSD 860-119246/42 Matrix: Water Analysis Batch: 119246		C	Client S	ample	ID: Lat	Control Prep Ty			
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitrate as N	10.0	10.05		mg/L		101	80 - 120	0	20
Nitrite as N	10.0	9.742		mg/L		97	80 - 120	0	20

#### Lab Sample ID: LLCS 860-119246/6

#### **Matrix: Water** Analysis Batch: 119246

	Spike	LLCS LL	cs		%Rec
Analyte	Added	Result Qu	ualifier Unit	D %Rec	Limits
Nitrate as N	0.100	0.1030	mg/L	103	50 - 150
Nitrite as N	0.100	0.08165 J	mg/L	82	50 - 150

#### Lab Sample ID: 860-56136-A-1 MS **Matrix: Water** Analysis Batch: 119246

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Nitrate as N	0.489		10.0	10.48		mg/L		100	80 - 120	
Nitrite as N	0.960	F1	2.50	2.089	F1	mg/L		45	80 - 120	

#### Lab Sample ID: 860-56136-A-1 MSD Matrix: Water

Analy	vsis	Batch:	119246
7 11 101		Batom	1102-10

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Nitrate as N	0.489		10.0	10.48		mg/L		100	80 - 120	0	15	
Nitrite as N	0.960	F1	2.50	2.075	F1	mg/L		45	80 - 120	1	15	

#### Lab Sample ID: 870-20135-G-1 MS Matrix: Water

#### Analysis Batch: 119246

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Nitrate as N	0.103		10.0	9.894		mg/L		98	80 - 120	
Nitrite as N	0.845	F2 F1	2.50	3.250		mg/L		96	80 - 120	

**Eurofins Carlsbad** 

Prep Type: Total/NA

Spike

Added

10.0

10.0

Spike

Added

10.0

10.0

#### **Released to Imaging: 2/17/2025 2:02:20 PM**

#### **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Client Sample ID: Matrix Spike Duplicate** 

**Client Sample ID: Matrix Spike** 

**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

Prep Type: Total/NA

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

 Lab Sample ID: 870-20135 Matrix: Water	-G-1 MSD							Client S	Samp	ole ID: N	latrix Spil Prep Ty		
Analysis Batch: 119246													
	Sample	San	nple	Spike		MSD	MSD				%Rec		RPD
Analyte	Result	Qua	lifier	Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitrate as N	0.103			10.0		10.01		mg/L		99	80 - 120	1	15
Nitrite as N	0.845	F2 F	-1	2.50		2.088	F2 F1	mg/L		50	80 - 120	44	15
	-I-2 MS								С	lient Sa	mple ID: I	Matrix :	Spike
Matrix: Water											Prep Ty		
Analysis Batch: 119246											перту		
Analysis Baten. 110240	Sample	San	nple	Spike		MS	MS				%Rec		
Analyte	Result			Added		-	Qualifier	Unit	D	%Rec	Limits		
Nitrate as N	<0.100			10.0		10.07		mg/L		101	80 - 120		
Nitrite as N	<0.100			2.50		2.394		mg/L		96	80 - 120		
	<0.100	0		2.50		2.004		ing/∟		30	00 - 120		
Lab Sample ID: 880-32623	-I-2 MSD							Client S	Samp	ole ID: N	latrix Spil	ke Dup	licate
Matrix: Water											Prep Ty	pe: Tot	al/NA
Analysis Batch: 119246													
	Sample	San	nple	Spike		MSD	MSD				%Rec		RPD
Analyte	Result	Qua	alifier	Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitrate as N	<0.100	U		10.0		10.06		mg/L		101	80 - 120	0	15
Nitrite as N	<0.100	U		2.50		2.388		mg/L		96	80 - 120	0	15
_													
Lab Sample ID: MB 860-11	9774/3								Clie	ent Sam	ple ID: M		
Matrix: Water											Prep Ty	pe: Tot	al/NA
Analysis Batch: 119774													
		MB	MB										
Analyte			Qualifier		RL	I	MDL Unit	D	) P	repared	Analyz	zed	Dil Fac
Chloride	<0	.500	U		0.500		mg/L				08/31/23	22:05	1
Fluoride	<0	.500	U		0.500		mg/L				08/31/23	22:05	1
Sulfate	<0	.500	U		0.500		mg/L				08/31/23	22:05	1
Ξ													
Lab Sample ID: LCS 860-1	19774/4							Clier	nt Sa	mple ID	: Lab Cor		
Matrix: Water											Prep Ty	pe: Tot	al/NA
Analysis Batch: 119774													
				Spike			LCS				%Rec		
Analyte				Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride				10.0		9.666		mg/L		97	90 - 110		
Fluoride				10.0		10.08		mg/L		101	90 - 110		
Lab Sample ID: LCSD 860	119774/5						·	lient Sa	mnlo	ID: I at	o Control	Sample	
Matrix: Water	101140							anonit Odi	mpie		Prep Ty		
											Fiep iy	pe. Iot	alina
Analysis Batch: 119774				Spike			LCSD				%Rec		RPD
Analyte				Added		-	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride				10.0		9.672		mg/L		97	90 - 110		20
Fluoride				10.0		10.10		mg/L		101	90 - 110 90 - 110	0	20
				10.0		10.10		ing/L		101	50-110	0	20
Lab Sample ID: LLCS 860-	119774/7							Clier	nt Sa	mple ID	: Lab Cor	ntrol Sa	mple
Matrix: Water										-	Prep Ty		
Analysis Batch: 119774											<b>-</b> - <b>-</b>		-
				Spike		LLCS	LLCS				%Rec		
Analyte				Added			Qualifier	Unit	D	%Rec	Limits		
				0.500		0.50.40					50 450		

Job ID: 890-5167-1

50 - 150

113

0.5648

mg/L

0.500

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

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#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LLCS 860- Matrix: Water	-119774/7					Client	Sai	mple ID	: Lab Con Prep Tyj		
Analysis Batch: 119774			Spike	2011	LLCS				%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Fluoride			0.500	0.4207				84	50 - 150		
Sulfate						mg/L		64 64			
			0.500	0.3203	J	mg/L		04	50 - 150		
Lab Sample ID: 890-5183- Matrix: Water	A-2 MS						CI	ient Sa	mple ID: M Prep Tyj		
Analysis Batch: 119774											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	11.9		10.0	22.08		mg/L		102	90 - 110		
Fluoride	<0.500	U	10.0	10.23		mg/L		102	90 - 110		
Sulfate	<0.500	U *+	10.0	10.87		mg/L		106	90 - 110		
Lab Sample ID: 890-5183-	A-2 MSD					Client Sa	mn	Ie ID: M	latrix Spik	e Dun	licate
Matrix: Water									Prep Ty		
Analysis Batch: 119774											
Analysis Baton. 110114	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Chloride	11.9	Quaimer	10.0	22.11	Quaimer	mg/L		102	90 - 110	0	15
Fluoride						-		102	90 - 110 90 - 110	0	
Sulfate	<0.500 <0.500		10.0 10.0	10.25 10.90		mg/L mg/L		102	90 - 110 90 - 110	0	1: 1:
Lab Sample ID: MB 860-12 Matrix: Water	20418/91						Clie	ent Sam	ple ID: Mo Prep Ty		
Analysis Batch: 120418											
	_	MB MB				_	_	_			
Analyte		sult Qualifier			MDL Unit	D	P	repared	Analyz		Dil Fa
Chloride		.500 U		.500	mg/L				09/07/23		
Fluoride	<0	.500 U	0	.500	mg/L				09/07/23		
Sulfate	<0	.500 U	0	.500	mg/L				09/07/23	06:08	
											ample
Lab Sample ID: LCS 860-1 Matrix: Water	20418/92					Client	Sai	mple ID	: Lab Con Prep Ty		
Matrix: Water	20418/92					Client	Sai	mple ID	: Lab Con Prep Tyj		
	20418/92		Spike	LCS	LCS	Client	Sai	mple ID			
Matrix: Water	20418/92		Spike Added		LCS Qualifier	Client	Sai D	mple ID %Rec	Prep Tyj		
Matrix: Water Analysis Batch: 120418 Analyte	20418/92		Added	Result		Unit			Prep Tyj %Rec		
Matrix: Water Analysis Batch: 120418 Analyte Chloride	20418/92		Added 10.0	<b>Result</b> 9.764		Unit mg/L		%Rec 98	Prep Typ %Rec Limits 90 - 110		
Matrix: Water Analysis Batch: 120418 Analyte Chloride Fluoride	20418/92		Added 10.0 10.0	<b>Result</b> 9.764 10.09		Unit mg/L mg/L		%Rec 98 101	Prep Typ       %Rec       Limits       90 - 110       90 - 110		
Matrix: Water Analysis Batch: 120418 Analyte Chloride	20418/92		Added 10.0	<b>Result</b> 9.764		Unit mg/L		%Rec 98	Prep Typ %Rec Limits 90 - 110		
Matrix: Water Analysis Batch: 120418 Analyte Chloride Fluoride Sulfate Lab Sample ID: LCSD 860 Matrix: Water			Added 10.0 10.0	<b>Result</b> 9.764 10.09	Qualifier	Unit mg/L mg/L mg/L	<u>D</u>	%Rec 98 101 98	Prep Typ       %Rec       Limits       90 - 110       90 - 110	oe: Tot  Sample	e Dup
Matrix: Water Analysis Batch: 120418 Analyte Chloride Fluoride Sulfate Lab Sample ID: LCSD 860			Added 10.0 10.0 10.0	<b>Result</b> 9.764 10.09 9.845	Qualifier	Unit mg/L mg/L mg/L	<u>D</u>	%Rec 98 101 98	Prep Tyl       %Rec       Limits       90 - 110       90 - 110       90 - 110       90 - 110       Prep Tyl	oe: Tot  Sample	e Dup
Matrix: Water Analysis Batch: 120418 Analyte Chloride Fluoride Sulfate Lab Sample ID: LCSD 860 Matrix: Water Analysis Batch: 120418			Added 10.0 10.0 10.0 <b>Spike</b>	Result 9.764 10.09 9.845	Qualifier	Unit mg/L mg/L mg/L	<u>D</u> Iple	%Rec 98 101 98 ID: Lab	Prep Typ %Rec Limits 90 - 110 90 - 110 90 - 110 O Control S Prep Typ %Rec	Sample	e Dup tal/NA RPI
Matrix: Water Analysis Batch: 120418 Analyte Chloride Fluoride Sulfate Lab Sample ID: LCSD 860 Matrix: Water Analysis Batch: 120418 Analyte			Added 10.0 10.0 10.0 Spike Added	Result       9.764       10.09       9.845       LCSD       Result	Qualifier	Unit mg/L mg/L mg/L Client Sam	<u>D</u>	%Rec 98 101 98 ID: Lat	Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 0 Control S Prep Ty %Rec Limits	Sample Sample ce: Tot	e Dup al/NA RPC Limi
Matrix: Water Analysis Batch: 120418 Analyte Chloride Fluoride Sulfate Lab Sample ID: LCSD 860 Matrix: Water Analysis Batch: 120418 Analyte Chloride			Added 10.0 10.0 10.0 Spike Added 10.0	Result       9.764       10.09       9.845       LCSD       Result       9.736	Qualifier	Unit mg/L mg/L mg/L Client Sam	<u>D</u> Iple	%Rec       98       101       98       ID: Lab       %Rec       97	Prep Tyj %Rec Limits 90 - 110 90 - 110 90 - 110 Control S Prep Tyj %Rec Limits 90 - 110	Sample De: Tot	e Dup al/NA RPC Limit 20
Matrix: Water Analysis Batch: 120418 Analyte Chloride Fluoride Sulfate Lab Sample ID: LCSD 860 Matrix: Water Analysis Batch: 120418 Analyte			Added 10.0 10.0 10.0 Spike Added	Result       9.764       10.09       9.845       LCSD       Result	Qualifier	Unit mg/L mg/L mg/L Client Sam	<u>D</u> Iple	%Rec 98 101 98 ID: Lat	Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 0 Control S Prep Ty %Rec Limits	Sample Sample ce: Tot	e Dup al/NA RPC Limit

**Eurofins Carlsbad** 

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

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#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 870-20250- Matrix: Water	A-1 MS						CI	lient Sa	mple ID: I Prep Ty		
Analysis Batch: 120418		•	• •						~·-		
	•	Sample	Spike	-	MS		_	~-	%Rec		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Chloride	84.9		10.0	93.40	4	mg/L		85	90 - 110		
Fluoride	<0.500	U	10.0	10.56		mg/L		102	90 - 110		
Sulfate	53.9		10.0	61.05	4	mg/L		72	90 - 110		
Lab Sample ID: 870-20250-	A-1 MSD					Client S	amp	le ID: N	latrix Spil		
Matrix: Water									Prep Ty	pe: lot	al/NA
Analysis Batch: 120418		•							~·-		
	•	Sample	Spike	-	MSD		_		%Rec		RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Chloride	84.9		10.0	93.45	4	mg/L		86	90 - 110	0	15
Fluoride	<0.500	U	10.0	10.61		mg/L		102	90 - 110	1	15
Sulfate	53.9		10.0	62.02	4	mg/L		81	90 - 110	2	15
Lab Sample ID: MB 860-12	0419/91						Clie	ent Sam	ple ID: M		
Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 120419		MB MB									
Analyte	Re	sult Qualifier	RL		MDL Unit	D	Р	repared	Analyz	ed	Dil Fac
Nitrate as N		.100 U	0.100		<u></u>		·	ropulou	09/07/23		1
Nitrite as N		.100 U	0.100		mg/L				09/07/23		1
	0		01100						00/01/20		
Lab Sample ID: LCS 860-12 Matrix: Water	20419/92					Clien	it Sai	mple ID	: Lab Cor Prep Ty		
									перту	pe. 101	all 11/
Analysis Batch: 120419			Spike	1.09	LCS				%Rec		
Analyte			Added	-	Qualifier	Unit	D	%Rec	Limits		
Nitrate as N			10.0	10.10	Quaimer			101	80 - 120		
						mg/L					
Nitrite as N			10.0	9.611		mg/L		96	80 - 120		
Lab Sample ID: LCSD 860-	120419/93				(	Client Sar	nple	ID: Lab	<b>Control</b>		
Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 120419											
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitrate as N			10.0	10.09		mg/L		101	80 - 120	0	20
Nitrite as N			10.0	9.633		mg/L		96	80 - 120	0	20
Lab Sample ID: 870-20250-	A-1 MS						CI	lient Sa	mple ID: I	Matrix \$	Spike
Matrix: Water									· Prep Ty		
Analysis Batch: 120419	Sample	Sample	Spike	Ме	MS				%Rec		
Analyta	•	Qualifier	Added		MS Qualifier	Unit	Б	%Rec			
Analyte Nitrate as N	0.867		10.0	10.93	Quaimer	mg/L	D	101	Limits 80 - 120		
				111 43		mau		1111	80 120		
Nitrite as N	<0.100		2.50	2.302		mg/L		92	80 - 120		

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#### **QC Sample Results**

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 870-20250- Matrix: Water Analysis Batch: 120419	A-1 MSD					Client	Samp	le ID: N	latrix Spil Prep Ty		
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitrate as N	0.867		10.0	10.94		mg/L		101	80 - 120	0	15
Nitrite as N	<0.100	U F2	2.50	2.847	F2	mg/L		114	80 - 120	21	15

#### Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 860-1194 Matrix: Water Analysis Batch: 119617	Analysis Batch: 119617 MB MB							le ID: Methoc e: Total Recov Prep Batch:	verable
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	< 0.500	U	0.500		mg/L		08/30/23 11:30	08/30/23 20:44	1
Potassium	<0.500	U	0.500		mg/L		08/30/23 11:30	08/30/23 20:44	1
Calcium	<0.200	U	0.200		mg/L		08/30/23 11:30	08/30/23 20:44	1
Magnesium	<0.200	U	0.200		mg/L		08/30/23 11:30	08/30/23 20:44	1
Manganese	<0.0200	U	0.0200		mg/L		08/30/23 11:30	08/30/23 20:44	1
SiO2	<1.07	U	1.07		mg/L		08/30/23 11:30	08/30/23 20:44	1
Iron	<0.200	U	0.200		mg/L		08/30/23 11:30	08/30/23 20:44	1
Lead	<0.0100	U	0.0100		mg/L		08/30/23 11:30	08/30/23 20:44	1

#### Lab Sample ID: MB 860-119461/1-A Matrix: Water

#### Analysis Batch: 119721

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.500	U	0.500		mg/L		08/30/23 11:30	08/31/23 12:12	1
Lead	<0.0100	U	0.0100		mg/L		08/30/23 11:30	08/31/23 12:12	1

#### Lab Sample ID: LCS 860-119461/2-A Matrix: Water Analysis Batch: 119617

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Sodium	25.0	25.20		mg/L		101	85 - 115	
Potassium	10.0	10.10		mg/L		101	85 - 115	
Calcium	25.0	25.20		mg/L		101	85 - 115	
Magnesium	25.0	24.80		mg/L		99	85 - 115	
Manganese	1.00	1.050		mg/L		105	85 - 115	
SiO2	21.4	21.61		mg/L		101	85 - 115	
Iron	5.00	5.100		mg/L		102	85 - 115	
Lead	1.00	0.9990		mg/L		100	85 - 115	

#### Lab Sample ID: LCS 860-119461/2-A Matrix: Water alveis Ratch 440704

Analysis Batch: 119721	Spike	LCS	LCS				Prep Batch: 119461 %Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Sodium	25.0	23.10		mg/L		92	85 - 115
Lead	1.00	0.9360		mg/L		94	85 - 115

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# **Client Sample ID: Method Blank**

#### Prep Type: Total Recoverable Prep Batch: 119461

Client		Lab Control Sample	
	00/30/23 11.30	00/31/2312.12	

**Client Sample ID: Lab Control Sample** 

Prep Type: Total Recoverable

#### **Prep Type: Total Recoverable** Prep Batch: 119461

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCSD 860-119461/3-A Matrix: Water Analysis Batch: 119617			(	Client Sa			o Control pe: Total   Prep Ba	Recove	rable
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Sodium	25.0	25.30		mg/L		101	85 - 115	0	20
Potassium	10.0	10.00		mg/L		100	85 - 115	1	20
Calcium	25.0	25.40		mg/L		102	85 - 115	1	20
Magnesium	25.0	25.00		mg/L		100	85 - 115	1	20
Manganese	1.00	1.050		mg/L		105	85 - 115	0	20
SiO2	21.4	21.61		mg/L		101	85 - 115	0	20
Iron	5.00	5.130		mg/L		103	85 - 115	1	20
Lead	1.00	1.010		mg/L		101	85 - 115	1	20

#### Lab Sample ID: LCSD 860-119461/3-A Matrix: Water Analysis Batch: 119721

Analysis Batch: 119721							Prep Ba			
	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Sodium	25.0	23.10		mg/L		92	85 - 115	0	20	2
Lead	1.00	0.9370		mg/L		94	85 - 115	0	20	

#### Lab Sample ID: LLCS 860-119461/4-A Matrix: Water

Analysis Batch: 119721							Prep Batch: 119461
	Spike	LLCS	LLCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Sodium	0.500	0.3940	J	mg/L		79	50 - 150
Lead	0.0100	0.01130		mg/L		113	50 - 150

#### Lab Sample ID: 890-5167-I-4-A MS Matrix: Water Analysis Batch: 119617

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	
Potassium	5.47		10.0	17.70		mg/L		122	70 - 130	
Calcium	821	Е	25.0	867.0	E 4	mg/L		184	70 - 130	
Magnesium	75.0		25.0	102.0	Е	mg/L		108	70 - 130	
Manganese	0.956		1.00	2.060		mg/L		110	70 - 130	
SiO2	186		21.4	267.5	4	mg/L		379	70 - 130	
Iron	12.7	F1	5.00	24.70	F1	mg/L		240	70 - 130	
Lead	0.0114		1.00	0.9890		mg/L		98	70 - 130	

#### Lab Sample ID: 890-5167-I-4-A MS ^50 **Matrix: Water** Analysis Batch: 119721

Analysis Batch: 119721									Prep Ba	tch: 119461
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Sodium	297	^2	25.0	248.5	4	mg/L		-192	70 - 130	
Lead	<0.500	U	1.00	1.270		mg/L		127	70 - 130	

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**Prep Type: Total Recoverable** 

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total Recoverable** 

Client Sample ID: 890-5167-I-4-A MS **Prep Type: Total Recoverable** Prep Batch: 119461

Client Sample ID: 890-5167-I-4-A MS ^50

**Prep Type: Total Recoverable** 

10/2/2023 (Rev. 1)

Job ID: 890-5167-1

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

#### Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

#### Lab Sample ID: MB 860-121166/1-A **Matrix: Water** Analysis Batch: 121465

MB	MB							
Analyte Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium <0.500	U	0.500		mg/L		09/12/23 10:30	09/13/23 10:54	1
Potassium <0.500	U	0.500		mg/L		09/12/23 10:30	09/13/23 10:54	1
Calcium <0.200	U	0.200		mg/L		09/12/23 10:30	09/13/23 10:54	1
Magnesium <0.200	U	0.200		mg/L		09/12/23 10:30	09/13/23 10:54	1
Manganese <0.0200	U	0.0200		mg/L		09/12/23 10:30	09/13/23 10:54	1
SiO2 <1.07	U	1.07		mg/L		09/12/23 10:30	09/13/23 10:54	1
Iron <0.200	U	0.200		mg/L		09/12/23 10:30	09/13/23 10:54	1
Lead <0.0100	U	0.0100		mg/L		09/12/23 10:30	09/13/23 10:54	1

#### Lab Sample ID: LCS 860-121166/2-A Matrix: Water Analysis Batch: 121465

Analysis Batch: 121465							Prep Batch: 121166
-	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Sodium	25.0	25.20		mg/L		101	85 - 115
Potassium	10.0	9.930		mg/L		99	85 - 115
Calcium	25.0	25.60		mg/L		102	85 - 115
Magnesium	25.0	25.20		mg/L		101	85 - 115
Manganese	1.00	1.070		mg/L		107	85 - 115
SiO2	21.4	21.83		mg/L		102	85 - 115
Iron	5.00	5.130		mg/L		103	85 - 115
Lead	1.00	1.030		mg/L		103	85 - 115

#### Lab Sample ID: LCSD 860-121166/3-A **Matrix: Water**

#### Analysis Batch: 121465

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Sodium	25.0	25.30		mg/L		101	85 - 115	0	20
Potassium	10.0	10.00		mg/L		100	85 - 115	1	20
Calcium	25.0	25.60		mg/L		102	85 - 115	0	20
Magnesium	25.0	25.30		mg/L		101	85 - 115	0	20
Manganese	1.00	1.070		mg/L		107	85 - 115	0	20
SiO2	21.4	22.04		mg/L		103	85 - 115	1	20
Iron	5.00	5.160		mg/L		103	85 - 115	1	20
Lead	1.00	1.030		mg/L		103	85 - 115	0	20

#### Lab Sample ID: LLCS 860-121166/4-A Matrix: Water Analysis Batch: 121465

Analysis Batch: 121465							Prep Batch: 12	1166
	Spike	LLCS	LLCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Sodium	0.500	0.5320		mg/L		106	50 - 150	
Potassium	0.500	0.4810	J	mg/L		96	50 - 150	
Calcium	0.200	0.2230		mg/L		112	50 - 150	
Magnesium	0.200	0.2390		mg/L		120	50 - 150	
Manganese	0.0200	0.01980	J	mg/L		99	50 - 150	
SiO2	1.07	1.149		mg/L		107	50 - 150	
Iron	0.200	0.2220		mg/L		111	50 - 150	

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Job ID: 890-5167-1

**Client Sample ID: Method Blank Prep Type: Total Recoverable** Prep Batch: 121166 5 6

**Client Sample ID: Lab Control Sample** 

Prep Type: Total Recoverable

Prep Type: Total Recoverable

Prep Batch: 121166

**Client Sample ID: Lab Control Sample Dup** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total Recoverable** 

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Lab Sample ID: LLCS 860-121166/4-A

#### Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Job ID: 890	-5167-1
Client Sample ID: Lab Control	Sample
Prep Type: Total Reco	verable
Prep Batch:	121166

Matrix: Water Analysis Batch: 121465							F	Prep Ty	pe: Total Re Prep Bato	coverable coverable
			Spike	LLCS	LLCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Lead			0.0100	0.009940	J	mg/L		99	50 - 150	
Lab Sample ID: 860-56847-	-F-1-A MS						CI	lient Sa	mple ID: Ma	trix Spike
Matrix: Water									pe: Total Re	
Analysis Batch: 121465									•	h: 121166
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Sodium	11.0		25.0	36.60		mg/L		102	70 - 130	
Potassium	4.76		10.0	14.90		mg/L		101	70 - 130	
Calcium	77 6		25.0	103.0	F	ma/l		102	70 130	

				0		
Calcium	77.6	25.0	103.0 E	mg/L	102	70 - 130
Magnesium	18.7	25.0	43.90	mg/L	101	70 - 130
Manganese	1.58	1.00	2.600	mg/L	102	70 - 130
SiO2	15.2	21.4	37.45	mg/L	104	70 - 130
Iron	3.82	5.00	9.000	mg/L	104	70 - 130
Lead	0.0378	1.00	1.060	mg/L	102	70 - 130

#### Lab Sample ID: 860-56901-A-6-B MS ^50 Matrix: Water Analysis Batch: 121465

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Sodium	2180		25.0	2215	4	mg/L		140	70 - 130
Potassium	<25.0	U F1	10.0	28.05	F1	mg/L		62	70 - 130
Calcium	174		25.0	201.0	4	mg/L		108	70 - 130
Magnesium	34.9		25.0	61.50		mg/L		106	70 - 130
Manganese	<1.00	U	1.00	2.040		mg/L		109	70 - 130
SiO2	<53.5	U	21.4	73.51		mg/L		117	70 - 130
Iron	<10.0	U	5.00	<10.0	U	mg/L		114	70 - 130
Lead	<0.500	U	1.00	1.090		mg/L		109	70 - 130

#### Lab Sample ID: 860-56901-A-6-C MSD ^50 Matrix: Water Analysis Batch: 121465

Analysis Batch: 121465									Prep Ba	Prep Batch: 12116		
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Sodium	2180		25.0	2175	4	mg/L		-20	70 - 130	2	20	
Potassium	<25.0	U F1	10.0	26.90	F1	mg/L		51	70 - 130	4	20	
Calcium	174		25.0	198.5	4	mg/L		98	70 - 130	1	20	
Magnesium	34.9		25.0	61.50		mg/L		106	70 - 130	0	20	
Manganese	<1.00	U	1.00	2.040		mg/L		109	70 - 130	0	20	
SiO2	<53.5	U	21.4	73.51		mg/L		117	70 - 130	0	20	
Iron	<10.0	U	5.00	<10.0	U	mg/L		114	70 - 130	0	20	
Lead	<0.500	U	1.00	0.9950		mg/L		100	70 - 130	9	20	

#### Lab Sample ID: 870-20080-X-7-E MSD Matrix: Water .....

Analysis Batch: 119617									Prep Ba	atch: 11	19461
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Sodium	30.7	*+	25.0	56.30		mg/L		102	70 - 130	1	20

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**Client Sample ID: Matrix Spike Prep Type: Total Recoverable** Prep Batch: 121166

**Client Sample ID: Matrix Spike Duplicate** 

**Client Sample ID: Matrix Spike Duplicate** 

**Prep Type: Total Recoverable** 

**Prep Type: Dissolved** 

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

#### Lab Sample ID: 870-20080-X-7-E MSD Matrix: Water Analysis Batch: 119617

Analysis Batch: 119617									Prep Ba		19461
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Potassium	6.92	*+	10.0	17.00		mg/L		101	70 - 130	2	20
Calcium	30.3		25.0	55.70		mg/L		102	70 - 130	2	20
Magnesium	8.16		25.0	33.20		mg/L		100	70 - 130	2	20
Manganese	0.0731		1.00	1.120		mg/L		105	70 - 130	2	20
SiO2	7.10		21.4	29.32		mg/L		104	70 - 130	1	20
Iron	<0.200	U	5.00	5.200		mg/L		104	70 - 130	2	20
Lead	<0.0100	U	1.00	1.000		mg/L		100	70 - 130	2	20

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Sodium	28.1		25.0	51.80		mg/L		95	70 - 130	2	20
Lead	<0.0100	U	1.00	0.9390		mg/L		93	70 - 130	2	20

Lab Sample ID: MB 860-120638/20-B
Matrix: Water
Analysis Batch: 121465

	MB	INIB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.500	U	0.500		mg/L		09/12/23 10:30	09/13/23 13:11	1
Potassium	<0.500	U	0.500		mg/L		09/12/23 10:30	09/13/23 13:11	1
Calcium	<0.200	U	0.200		mg/L		09/12/23 10:30	09/13/23 13:11	1
Magnesium	<0.200	U	0.200		mg/L		09/12/23 10:30	09/13/23 13:11	1
Manganese	<0.0200	U	0.0200		mg/L		09/12/23 10:30	09/13/23 13:11	1
SiO2	<1.07	U	1.07		mg/L		09/12/23 10:30	09/13/23 13:11	1
Iron	<0.200	U	0.200		mg/L		09/12/23 10:30	09/13/23 13:11	1
Lead	<0.0100	U	0.0100		mg/L		09/12/23 10:30	09/13/23 13:11	1

#### Lab Sample ID: LCS 860-120638/21-B Matrix: Water Analysis Batch: 121465

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Sodium	25.0	25.80		mg/L		103	85 - 115
Potassium	10.0	10.30		mg/L		103	85 - 115
Calcium	25.0	26.00		mg/L		104	85 - 115
Magnesium	25.0	25.60		mg/L		102	85 - 115
Manganese	1.00	1.080		mg/L		108	85 - 115
SiO2	21.4	22.04		mg/L		103	85 - 115
Iron	5.00	5.220		mg/L		104	85 - 115
Lead	1.00	1.050		mg/L		105	85 - 115

#### Lab Sample ID: LCSD 860-120638/22-B **Client Sample ID: Lab Control Sample Dup Matrix: Water Prep Type: Dissolved** Analysis Batch: 121465 **Prep Batch: 121166** Spike LCSD LCSD %Rec RPD Result Qualifier Unit Analyte Added D %Rec Limits RPD Limit Sodium 25.0 25.70 mg/L 103 85 - 115 0 20

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#### Client Sample ID: Method Blank Prep Type: Dissolved Prep Batch: 121166

**Client Sample ID: Matrix Spike Duplicate** 

**Client Sample ID: Matrix Spike Duplicate** 

**Prep Type: Dissolved** 

**Prep Type: Dissolved** 

Prep Batch: 119461

Client Sample ID: Lab Control Sample Prep Type: Dissolved

Prep Batch: 121166

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Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCSD 860-120638/22-B Matrix: Water Analysis Batch: 121465	rix: Water alysis Batch: 121465						Control Prep Type Prep Ba	e: Diss	olved	
	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Potassium	10.0	10.30		mg/L		103	85 - 115	0	20	
Calcium	25.0	26.00		mg/L		104	85 - 115	0	20	
Magnesium	25.0	25.60		mg/L		102	85 - 115	0	20	
Manganese	1.00	1.080		mg/L		108	85 - 115	0	20	
SiO2	21.4	22.26		mg/L		104	85 - 115	1	20	
Iron	5.00	5.230		mg/L		105	85 - 115	0	20	
Lead	1.00	1.050		mg/L		105	85 - 115	0	20	

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-119920/3 Matrix: Water Analysis Batch: 119920						(	Client Sam	ple ID: Method Prep Type: To		
	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Alkalinity	<4.00	U	4.00		mg/L			09/01/23 11:09	1	
Carbonate Alkalinity as CaCO3	<4.00	U	4.00		mg/L			09/01/23 11:09	1	
Bicarbonate Alkalinity as CaCO3	<4.00	U	4.00		mg/L			09/01/23 11:09	1	

#### Lab Sample ID: LCS 860-119920/4 **Matrix: Water**

Analysis Batch: 119920

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Alkalinity	250	243.9		mg/L		98	85 - 115	 

#### Lab Sample ID: LCSD 860-119920/5 **Matrix: Water**

Analysis Batch: 119920									
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Alkalinity	250	246.8		mg/L		99	85 - 115	1	20

#### Lab Sample ID: 890-5167-2 DU Matrix: Water Analysis Batch: 119920

	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Alkalinity	219		216.4		mg/L		 1	20
Carbonate Alkalinity as CaCO3	<4.00	U	<4.00	U	mg/L		NC	20
Bicarbonate Alkalinity as CaCO3	219		216.4		mg/L		1	20

#### Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-119637/1				Client Sample ID: Method Blan							
Matrix: Water								Prep Type: To	otal/NA		
Analysis Batch: 119637											
-	MB	MB									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Total Dissolved Solids	<5.00	U	5.00		mg/L			08/31/23 10:12	1		

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# **Client Sample ID: Lab Control Sample**

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Type: Total/NA** 

**Client Sample ID: BH14** 

Prep Type: Total/NA

#### Job ID: 890-5167-1

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Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line Page 481 of 540

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Job ID: 890-5167-1

Lab Sample ID: LCS 860-119637/2	2					Clie	nt Sar	nple ID	: Lab Cor		
Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 119637											
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			1000	1001		mg/L		100	80 - 120		
Lab Sample ID: LCSD 860-119637	7/3				c	lient Sa	mple	ID: Lal	o Control	Sample	e Dup
Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 119637											
-			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Total Dissolved Solids			1000	1006		mg/L		101	80 - 120	0	1(
Lab Sample ID: LLCS 860-119637	//4					Clie	nt Sar	nple ID	: Lab Cor	ntrol Sa	mple
Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 119637											
-			Spike	LLCS	LLCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			5.00	5.500		mg/L		110	50 - 150		
Lab Sample ID: 860-56232-A-1 DI	J							Client	Sample II	D: Dup	licate
Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 119637										-	
· · · · · · · · · · · · · · · · · · ·	mple	Sample		DU	DU						RPD
Analyte R	esult	Qualifier		Result	Qualifier	Unit	D			RPD	Limi
Total Dissolved Solids	737			736.0		mg/L				0.1	10
lethod: SM 4500 H+ B - pH											
Lab Sample ID: 890-5167-3 DU									lient Sam		

Analysis Batch: 119995							 -	
	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
рН	7.8	HF	7.8		SU	_	 0.5	20
Temperature	14.9	HF	14.8		Degrees C		0.7	20

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Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line Page 482 of 540

# 8 9 10 11

HPLC/IC	
Analysis Batch: 119245	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-5167-1	BH13	Total/NA	Water	300.0	
390-5167-2	BH14	Total/NA	Water	300.0	
390-5167-3	BH18	Total/NA	Water	300.0	
390-5167-4	BH19	Total/NA	Water	300.0	
890-5167-4	BH19	Total/NA	Water	300.0	
390-5167-5	BH21	Total/NA	Water	300.0	
890-5167-5	BH21	Total/NA	Water	300.0	
890-5167-6	BH22	Total/NA	Water	300.0	
MB 860-119245/156	Method Blank	Total/NA	Water	300.0	
MB 860-119245/3	Method Blank	Total/NA	Water	300.0	
MB 860-119245/40	Method Blank	Total/NA	Water	300.0	
LCS 860-119245/157	Lab Control Sample	Total/NA	Water	300.0	
LCS 860-119245/41	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-119245/158	Lab Control Sample Dup	Total/NA	Water	300.0	
LCSD 860-119245/42	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-119245/7	Lab Control Sample	Total/NA	Water	300.0	
860-56136-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
860-56136-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
870-20135-G-1 MS	Matrix Spike	Total/NA	Water	300.0	
870-20135-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
880-32623-I-2 MS	Matrix Spike	Total/NA	Water	300.0	
880-32623-I-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

#### Analysis Batch: 119246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5167-1	BH13	Total/NA	Water	300.0	
890-5167-2	BH14	Total/NA	Water	300.0	
890-5167-3	BH18	Total/NA	Water	300.0	
890-5167-4	BH19	Total/NA	Water	300.0	
890-5167-5	BH21	Total/NA	Water	300.0	
890-5167-6	BH22	Total/NA	Water	300.0	
MB 860-119246/156	Method Blank	Total/NA	Water	300.0	
MB 860-119246/3	Method Blank	Total/NA	Water	300.0	
MB 860-119246/40	Method Blank	Total/NA	Water	300.0	
LCS 860-119246/157	Lab Control Sample	Total/NA	Water	300.0	
LCS 860-119246/41	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-119246/158	Lab Control Sample Dup	Total/NA	Water	300.0	
LCSD 860-119246/42	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-119246/6	Lab Control Sample	Total/NA	Water	300.0	
860-56136-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
860-56136-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
870-20135-G-1 MS	Matrix Spike	Total/NA	Water	300.0	
870-20135-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
880-32623-I-2 MS	Matrix Spike	Total/NA	Water	300.0	
880-32623-I-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

#### Analysis Batch: 119774

Lab Sample ID 890-5167-1 - DL	Client Sample ID BH13	Prep Type Total/NA	Water	Method 300.0	Prep Batch
890-5167-2 - DL	BH14	Total/NA	Water	300.0	
MB 860-119774/3	Method Blank	Total/NA	Water	300.0	

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Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

#### HPLC/IC (Continued)

#### Analysis Batch: 119774 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 860-119774/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-119774/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-119774/7	Lab Control Sample	Total/NA	Water	300.0	
890-5183-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
890-5183-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method
MB 860-120418/91	Method Blank	Total/NA	Water	300.0
LCS 860-120418/92	Lab Control Sample	Total/NA	Water	300.0
LCSD 860-120418/93	Lab Control Sample Dup	Total/NA	Water	300.0
870-20250-A-1 MS	Matrix Spike	Total/NA	Water	300.0
870-20250-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0

#### Analysis Batch: 120419

Lab Sample ID MB 860-120419/91	Client Sample ID Method Blank	Prep Type Total/NA	Matrix Water	Method 300.0	Prep Batch
LCS 860-120419/92	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-120419/93	Lab Control Sample Dup	Total/NA	Water	300.0	
870-20250-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
870-20250-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

#### **Metals**

#### Prep Batch: 119461

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-5167-1	BH13	Total Recoverable	Water	200.7	
890-5167-2	BH14	Total Recoverable	Water	200.7	
MB 860-119461/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 860-119461/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 860-119461/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	
LLCS 860-119461/4-A	Lab Control Sample	Total Recoverable	Water	200.7	
870-20080-X-7-E MSD	Matrix Spike Duplicate	Dissolved	Water	200.7	
890-5167-I-4-A MS	890-5167-I-4-A MS	Total Recoverable	Water	200.7	
890-5167-I-4-A MS ^50	890-5167-I-4-A MS ^50	Total Recoverable	Water	200.7	

#### Analysis Batch: 119617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5167-1	BH13	Total Recoverable	Water	200.7 Rev 4.4	119461
890-5167-1	BH13	Total Recoverable	Water	200.7 Rev 4.4	119461
890-5167-2	BH14	Total Recoverable	Water	200.7 Rev 4.4	119461
890-5167-2	BH14	Total Recoverable	Water	200.7 Rev 4.4	119461
MB 860-119461/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	119461
LCS 860-119461/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	119461
LCSD 860-119461/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	119461
870-20080-X-7-E MSD	Matrix Spike Duplicate	Dissolved	Water	200.7 Rev 4.4	119461
890-5167-I-4-A MS	890-5167-I-4-A MS	Total Recoverable	Water	200.7 Rev 4.4	119461

#### Analysis Batch: 119721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5167-1	BH13	Total Recoverable	Water	200.7 Rev 4.4	119461

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Prep Batch

#### Job ID: 890-5167-1

Prep Type

Dissolved

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total Recoverable

**Total Recoverable** 

**Total Recoverable** 

**Total Recoverable** 

**Total Recoverable** 

Total Recoverable

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

**Client Sample ID** 

Lab Control Sample

Lab Control Sample

**Client Sample ID** 

BH13

**BH14** 

**BH18** 

**BH19** 

BH21

BH22

Matrix Spike Duplicate

890-5167-I-4-A MS ^50

Lab Control Sample Dup

Method Blank

BH14

#### **Metals (Continued)**

Lab Sample ID

MB 860-119461/1-A

LCS 860-119461/2-A

LCSD 860-119461/3-A

LLCS 860-119461/4-A

870-20080-X-7-E MSD

890-5167-I-4-A MS ^50

Lab Sample ID

890-5167-1

890-5167-2

890-5167-3

890-5167-4

890-5167-5

890-5167-6

Analysis Batch: 119896

890-5167-2

#### Analysis Batch: 119721 (Continued)

Method

200.7 Rev 4.4

Method

Matrix

Water

Water

Water

Water

Water

Water

Water

Matrix

Water

Water

Water

Water

Water

Water

Prep Batch

119461

119461

119461

119461

119461

119461

119461

Prep Batch

Job ID: 890-5167-1

SM 2340B	
SM 2340B	10
SM 2340B	
SM 2340B	44
SM 2340B	
SM 2340B	12
	12
	40

#### Filtration Batch: 120638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5167-3	BH18	Dissolved	Water	Filtration	
890-5167-4	BH19	Dissolved	Water	Filtration	
890-5167-5	BH21	Dissolved	Water	Filtration	
890-5167-6	BH22	Dissolved	Water	Filtration	
MB 860-120638/20-B	Method Blank	Dissolved	Water	Filtration	
LCS 860-120638/21-B	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 860-120638/22-B	Lab Control Sample Dup	Dissolved	Water	Filtration	

#### **Prep Batch: 121166**

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-5167-3	BH18	Dissolved	Water	200.7	120638
890-5167-4	BH19	Dissolved	Water	200.7	120638
890-5167-5	BH21	Dissolved	Water	200.7	120638
890-5167-6	BH22	Dissolved	Water	200.7	120638
MB 860-120638/20-B	Method Blank	Dissolved	Water	200.7	120638
MB 860-121166/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 860-120638/21-B	Lab Control Sample	Dissolved	Water	200.7	120638
LCS 860-121166/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 860-120638/22-B	Lab Control Sample Dup	Dissolved	Water	200.7	120638
LCSD 860-121166/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	
LLCS 860-121166/4-A	Lab Control Sample	Total Recoverable	Water	200.7	
860-56847-F-1-A MS	Matrix Spike	Total Recoverable	Water	200.7	
860-56901-A-6-B MS ^50	Matrix Spike	Total Recoverable	Water	200.7	
860-56901-A-6-C MSD ^50	Matrix Spike Duplicate	Total Recoverable	Water	200.7	

#### Analysis Batch: 121465

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-5167-3	BH18	Dissolved	Water	200.7 Rev 4.4	121166
890-5167-3	BH18	Dissolved	Water	200.7 Rev 4.4	121166
890-5167-4	BH19	Dissolved	Water	200.7 Rev 4.4	121166
890-5167-4	BH19	Dissolved	Water	200.7 Rev 4.4	121166
890-5167-5	BH21	Dissolved	Water	200.7 Rev 4.4	121166

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Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

#### Metals (Continued)

#### Analysis Batch: 121465 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-5167-5	BH21	Dissolved	Water	200.7 Rev 4.4	121166	
890-5167-6	BH22	Dissolved	Water	200.7 Rev 4.4	121166	
890-5167-6	BH22	Dissolved	Water	200.7 Rev 4.4	121166	
MB 860-120638/20-B	Method Blank	Dissolved	Water	200.7 Rev 4.4	121166	
MB 860-121166/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	121166	
LCS 860-120638/21-B	Lab Control Sample	Dissolved	Water     200.7 Rev 4.4       Water     200.7 Rev 4.4	200.7 Rev 4.4	121166	
LCS 860-121166/2-A	Lab Control Sample	Total Recoverable		121166		
LCSD 860-120638/22-B	Lab Control Sample Dup	Dissolved	Water	200.7 Rev 4.4	121166	
LCSD 860-121166/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	121166	
LLCS 860-121166/4-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	121166	
860-56847-F-1-A MS	Matrix Spike	Total Recoverable	Water	200.7 Rev 4.4	121166	
860-56901-A-6-B MS ^50	Matrix Spike	Total Recoverable	Water	200.7 Rev 4.4	121166	
860-56901-A-6-C MSD ^50	Matrix Spike Duplicate	Total Recoverable	Water	200.7 Rev 4.4	121166	

#### **General Chemistry**

#### Analysis Batch: 119185

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-5167-1	BH13	Total/NA	Water	SM 4500 CO2 D	
890-5167-2	BH14	Total/NA	Water	SM 4500 CO2 D	
890-5167-3	BH18	Total/NA	Water	SM 4500 CO2 D	
890-5167-4	BH19	Total/NA	Water	SM 4500 CO2 D	
890-5167-5	BH21	Total/NA	Water	SM 4500 CO2 D	
890-5167-6	BH22	Total/NA	Water	SM 4500 CO2 D	

#### Analysis Batch: 119559

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-5167-1	BH13	Total/NA	Water	SM 1030E	
890-5167-2	BH14	Total/NA	Water	SM 1030E	
890-5167-3	BH18	Total/NA	Water	SM 1030E	
890-5167-4	BH19	Total/NA	Water	SM 1030E	
890-5167-5	BH21	Total/NA	Water	SM 1030E	
890-5167-6	BH22	Total/NA	Water	SM 1030E	

#### Analysis Batch: 119637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5167-1	BH13	Total/NA	Water	SM 2540C	
890-5167-2	BH14	Total/NA	Water	SM 2540C	
890-5167-3	BH18	Total/NA	Water	SM 2540C	
890-5167-4	BH19	Total/NA	Water	SM 2540C	
890-5167-5	BH21	Total/NA	Water	SM 2540C	
890-5167-6	BH22	Total/NA	Water	SM 2540C	
MB 860-119637/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-119637/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-119637/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-119637/4	Lab Control Sample	Total/NA	Water	SM 2540C	
860-56232-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-5167-1	BH13	Total/NA	Water	SM 2320B	

Eurofins Carlsbad

#### Job ID: 890-5167-1

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

#### **General Chemistry (Continued)**

#### Analysis Batch: 119920 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5167-2	BH14	Total/NA	Water	SM 2320B	
390-5167-3	BH18	Total/NA	Water	SM 2320B	
390-5167-4	BH19	Total/NA	Water	SM 2320B	
390-5167-5	BH21	Total/NA	Water	SM 2320B	
390-5167-6	BH22	Total/NA	Water	SM 2320B	
/IB 860-119920/3	Method Blank	Total/NA	Water	SM 2320B	
CS 860-119920/4	Lab Control Sample	Total/NA	Water	SM 2320B	
CSD 860-119920/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
390-5167-2 DU	BH14	Total/NA	Water	SM 2320B	

#### Analysis Batch: 119995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-5167-2	BH14	Total/NA	Water	SM 2320B	
890-5167-3	BH18	Total/NA	Water	SM 2320B	
890-5167-4	BH19	Total/NA	Water	SM 2320B	
890-5167-5	BH21	Total/NA	Water	SM 2320B	
890-5167-6	BH22	Total/NA	Water	SM 2320B	
MB 860-119920/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-119920/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-119920/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
890-5167-2 DU	BH14	Total/NA	Water	SM 2320B	
-	995 Client Sample ID	Prep Type	Matrix	Method	Prep Batch
Lab Sample ID		Prep Type Total/NA	Matrix Water	Method SM 4500 H+ B	Prep Batch
Lab Sample ID 890-5167-1	Client Sample ID				Prep Batch
Lab Sample ID 890-5167-1 890-5167-2	Client Sample ID BH13	Total/NA	Water	SM 4500 H+ B	Prep Batch
Lab Sample ID 890-5167-1 890-5167-2 890-5167-3	Client Sample ID BH13 BH14	Total/NA Total/NA	Water Water	SM 4500 H+ B SM 4500 H+ B	Prep Batch
Lab Sample ID 890-5167-1 890-5167-2 890-5167-3 890-5167-4	Client Sample ID BH13 BH14 BH18	Total/NA Total/NA Total/NA	Water Water Water	SM 4500 H+ B SM 4500 H+ B SM 4500 H+ B	Prep Batch
Lab Sample ID       890-5167-1       890-5167-2       890-5167-3       890-5167-4       890-5167-5       890-5167-6	Client Sample ID BH13 BH14 BH18 BH19	Total/NA Total/NA Total/NA Total/NA	Water Water Water Water	SM 4500 H+ B SM 4500 H+ B SM 4500 H+ B SM 4500 H+ B	Prep Batch

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#### Job ID: 890-5167-1

Initial

Amount

0 mL

0 mL

50 mL

50 mL

50 mL

5 mL

Final

Amount

1.0 mL

1.0 mL

50 mL

50 mL

50 mL

200 mL

Batch

Number

119774

119245

119246

119461

119617

119461

119617

119461

119721

119896

119559

119920

119637

119185

119995

Dil

100

10

10

1

50

50

1

1

1

1

1

1

Factor

Run

DL

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Batch

Туре

Analysis

Prep

Prep

Prep

Batch

300.0

300.0

300.0

200.7

200.7

200.7

200.7 Rev 4.4

200.7 Rev 4.4

200.7 Rev 4.4

SM 2340B

SM 1030E

SM 2320B

SM 2540C

SM 4500 CO2 D

SM 4500 H+ B

Method

#### Client Sample ID: BH13 Date Collected: 08/28/23 10:00 Date Received: 08/28/23 13:56

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

**Total Recoverable** 

Total Recoverable

**Total Recoverable** 

Total Recoverable

**Total Recoverable** 

**Total Recoverable** 

Job ID: 890-5167-1

Lab

EET HOU

#### Lab Sample ID: 890-5167-1 Matrix: Water

Analyst

WP

Prepared

or Analyzed

09/01/23 02:08

08/29/23 20:52 A1S

08/29/23 20:52 A1S

08/30/23 11:30 MD

08/30/23 22:02 JDM

08/30/23 11:30 MD

08/30/23 22:20 JDM

08/30/23 11:30 MD

08/31/23 12:33 JDM

09/01/23 13:13 JDM

08/30/23 19:38 MC

09/01/23 13:03 TL

08/31/23 10:12 OH

09/01/23 17:29 MC

09/01/23 18:05 TL

#### Client Sample ID: BH14 Date Collected: 08/28/23 10:20 Date Received: 08/28/23 13:56

#### Lab Sample ID: 890-5167-2 Matrix: Water

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0	DL	100			119774	09/01/23 01:51	WP	EET HOU
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	119245	08/30/23 09:38	A1S	EET HOU
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	119246	08/30/23 09:38	A1S	EET HOU
Total Recoverable	Prep	200.7			50 mL	50 mL	119461	08/30/23 11:30	MD	EET HOU
Total Recoverable	Analysis	200.7 Rev 4.4		1			119617	08/30/23 22:06	JDM	EET HOU
Total Recoverable	Prep	200.7			50 mL	50 mL	119461	08/30/23 11:30	MD	EET HOU
Total Recoverable	Analysis	200.7 Rev 4.4		50			119617	08/30/23 22:24	JDM	EET HOU
Total Recoverable	Prep	200.7			50 mL	50 mL	119461	08/30/23 11:30	MD	EET HOU
Total Recoverable	Analysis	200.7 Rev 4.4		50			119721	08/31/23 12:35	JDM	EET HOU
Total/NA	Analysis	SM 2340B		1			119896	09/01/23 13:13	JDM	EET HOU
Total/NA	Analysis	SM 1030E		1			119559	08/30/23 19:38	MC	EET HOU
Total/NA	Analysis	SM 2320B		1			119920	09/01/23 13:12	TL	EET HOU
Total/NA	Analysis	SM 2540C		1	10 mL	200 mL	119637	08/31/23 10:12	ОН	EET HOU
Total/NA	Analysis	SM 4500 CO2 D		1			119185	09/01/23 17:29	MC	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			119995	09/01/23 18:08	TL	EET HOU

#### Client Sample ID: BH18 Date Collected: 08/28/23 10:40

Date Received: 08/28/23 13:56

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	119245	08/30/23 09:47	A1S	EET HOU

**Eurofins Carlsbad** 

Matrix: Water

Lab Sample ID: 890-5167-3

Initial

Amount

0 mL

250 mL

50 mL

250 mL

50 mL

100 mL

Final

Amount

1.0 mL

250 mL

50 mL

250 mL

50 mL

200 mL

Batch

Number

119246

120638

121166

121465

120638

121166

121465

119896

119559

119920

119637

119185

119995

Dil

1

1

50

1

1

1

1

1

1

Factor

Run

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Batch

Туре

Prep

Prep

Analysis

Filtration

Analysis

Filtration

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Batch

300.0

200.7

200.7

Method

Filtration

Filtration

200.7 Rev 4.4

200.7 Rev 4.4

SM 2340B

SM 1030E

SM 2320B

SM 2540C

SM 4500 CO2 D

SM 4500 H+ B

#### Client Sample ID: BH18 Date Collected: 08/28/23 10:40 Date Received: 08/28/23 13:56

Prep Type

Total/NA

Dissolved

Dissolved

Dissolved

Dissolved

Dissolved

Dissolved

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Lab

EET HOU

#### Lab Sample ID: 890-5167-3 Matrix: Water

Analyst

A1S

Prepared

or Analyzed

08/30/23 09:47

09/07/23 22:43 AGR

09/12/23 10:30 MD

09/13/23 13:22 JDM

09/07/23 22:43 AGR

09/12/23 10:30 MD

09/13/23 13:32 JDM

09/01/23 13:13 JDM

08/30/23 19:38 MC

09/01/23 13:29 TL

08/31/23 10:12 OH

09/01/23 17:29 MC

09/01/23 18:09 TL

8
9

#### Lab Sample ID: 890-5167-4 Matrix: Water

Lab Sample ID: 890-5167-5

Client Sample ID: BH19 Date Collected: 08/28/23 11:00 Date Received: 08/28/23 13:56

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	119245	08/30/23 09:55	A1S	EET HOU
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	119246	08/30/23 09:55	A1S	EET HOU
Total/NA	Analysis	300.0		10	0 mL	1.0 mL	119245	08/30/23 12:27	A1S	EET HOU
Dissolved	Filtration	Filtration			250 mL	250 mL	120638	09/07/23 22:43	AGR	EET HOU
Dissolved	Prep	200.7			50 mL	50 mL	121166	09/12/23 10:30	MD	EET HOU
Dissolved	Analysis	200.7 Rev 4.4		1			121465	09/13/23 13:25	JDM	EET HOU
Dissolved	Filtration	Filtration			250 mL	250 mL	120638	09/07/23 22:43	AGR	EET HOU
Dissolved	Prep	200.7			50 mL	50 mL	121166	09/12/23 10:30	MD	EET HOU
Dissolved	Analysis	200.7 Rev 4.4		50			121465	09/13/23 13:36	JDM	EET HOU
Total/NA	Analysis	SM 2340B		1			119896	09/01/23 13:13	JDM	EET HOU
Total/NA	Analysis	SM 1030E		1			119559	08/30/23 19:38	MC	EET HOU
Total/NA	Analysis	SM 2320B		1			119920	09/01/23 13:38	TL	EET HOU
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	119637	08/31/23 10:12	ОН	EET HOU
Total/NA	Analysis	SM 4500 CO2 D		1			119185	09/01/23 17:29	MC	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			119995	09/01/23 18:12	TL	EET HOU

#### Client Sample ID: BH21 Date Collected: 08/28/23 11:20 Date Received: 08/28/23 13:56

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	119245	08/30/23 10:04	A1S	EET HOU
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	119246	08/30/23 10:04	A1S	EET HOU
Total/NA	Analysis	300.0		10	0 mL	1.0 mL	119245	08/30/23 12:35	A1S	EET HOU

**Eurofins Carlsbad** 

Matrix: Water

Released to Imaging: 2/17/2025 2:02:20 PM

10/2/2023 (Rev. 1)

Initial

Amount

250 mL

50 mL

250 mL

50 mL

10 mL

Final

Amount

250 mL

50 mL

250 mL

50 mL

200 mL

Batch

Number

120638

121166

121465

120638

121166

121465

119896

119559

119920

119637

119185

119995

Dil

1

50

1

1

1

1

1

1

Factor

Run

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Batch

Туре

Prep

Prep

Filtration

Analysis

Filtration

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Client Sample ID: BH22

Date Collected: 08/28/23 11:40

Batch

Method

Filtration

Filtration

200.7

200.7 Rev 4.4

200.7 Rev 4.4

SM 2340B

SM 1030E

SM 2320B

SM 2540C

SM 4500 CO2 D

SM 4500 H+ B

200.7

#### Client Sample ID: BH21 Date Collected: 08/28/23 11:20 Date Received: 08/28/23 13:56

Prep Type

Dissolved

Dissolved

Dissolved

Dissolved

Dissolved

Dissolved

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Job ID: 890-5167-1

Lab

EET HOU

#### Lab Sample ID: 890-5167-5 Matrix: Water

Analyst

AGR

Prepared

or Analyzed

09/07/23 22:43

09/12/23 10:30 MD

09/13/23 13:29 JDM

09/07/23 22:43 AGR

09/12/23 10:30 MD

09/13/23 13:39 JDM

09/01/23 13:13 JDM

08/30/23 19:38 MC

09/01/23 13:46 TL

08/31/23 10:12 OH

09/01/23 17:29 MC

09/01/23 18:14 TL

5167 6	
LETHOU	
EET HOU	9

#### Lab Sample ID: 890-5167-6 Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	119245	08/30/23 10:12	A1S	EET HOU
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	119246	08/30/23 10:12	A1S	EET HOU
Dissolved	Filtration	Filtration			250 mL	250 mL	120638	09/07/23 22:43	AGR	EET HOU
Dissolved	Prep	200.7			50 mL	50 mL	121166	09/12/23 10:30	MD	EET HOU
Dissolved	Analysis	200.7 Rev 4.4		1			121465	09/13/23 14:01	JDM	EET HOU
Dissolved	Filtration	Filtration			250 mL	250 mL	120638	09/07/23 22:43	AGR	EET HOU
Dissolved	Prep	200.7			50 mL	50 mL	121166	09/12/23 10:30	MD	EET HOU
Dissolved	Analysis	200.7 Rev 4.4		50			121465	09/13/23 14:04	JDM	EET HOU
Total/NA	Analysis	SM 2340B		1			119896	09/01/23 13:13	JDM	EET HOU
Total/NA	Analysis	SM 1030E		1			119559	08/30/23 19:38	MC	EET HOU
Total/NA	Analysis	SM 2320B		1			119920	09/01/23 13:55	TL	EET HOU
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	119637	08/31/23 10:12	ОН	EET HOU
Total/NA	Analysis	SM 4500 CO2 D		1			119185	09/01/23 17:29	MC	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			119995	09/01/23 18:15	TL	EET HOU

#### Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

**Eurofins Carlsbad** 

Released to Imaging: 2/17/2025 2:02:20 PM

SM 2320B

SM 2320B

SM 2340B

SM 2340B

SM 2340B

SM 2340B

SM 4500 CO2 D

SM 4500 CO2 D

SM 4500 H+ B

## **Accreditation/Certification Summary**

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line Job ID: 890-5167-1

Page 490 of 540

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9

#### Laboratory: Eurofins Houston Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. Authority Program **Identification Number Expiration Date** Texas NELAP T104704215-23-53 06-30-24 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 SM 1030E Water Anion/Cation Balance

Ca

Mg

carbonate

Carbon dioxide

Temperature

Carbon Dioxide, Free

Bicarbonate Alkalinity as CaCO3

Magnesium hardness as calcium

Calcium hardness as calcium carbonate

Carbonate Alkalinity as CaCO3

Water

Water

Water

Water

Water

Water

Water

Water

Water

**Eurofins Carlsbad** 

#### **Method Summary**

#### Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET HOU
200.7 Rev 4.4	Metals (ICP)	EPA	EET HOU
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET HOU
SM 1030E	Cation Anion Balance	SM	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 4500 CO2 D	Carbon Dioxide and Forms of Alkalinity by Calculation	SM	EET HOU
SM 4500 H+ B	рН	SM	EET HOU
200.7	Preparation, Total Recoverable Metals	EPA	EET HOU
Filtration	Sample Filtration	None	EET HOU

#### Protocol References:

EPA = US Environmental Protection Agency

#### None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

#### Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

**Eurofins Carlsbad** 

#### **Sample Summary**

Client: Etech Environmental & Safety Solutions Project/Site: North Brushy PW Line Job ID: 890-5167-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-5167-1	BH13	Water	08/28/23 10:00	08/28/23 13:56
890-5167-2	BH14	Water	08/28/23 10:20	08/28/23 13:56
890-5167-3	BH18	Water	08/28/23 10:40	08/28/23 13:56
890-5167-4	BH19	Water	08/28/23 11:00	08/28/23 13:56
890-5167-5	BH21	Water	08/28/23 11:20	08/28/23 13:56
890-5167-6	BH22	Water	08/28/23 11:40	08/28/23 13:56

	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard t of service. Eurofins Xenco will be lable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced ur	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed				BH22	BH21	BHIS	DH18	BHIH	BHIS	Sample Identification	Total Containers:	Sample Custody Seals:	Cooler Custody Seals:	Samples Received Intact:	SAMPLE RECEIPT	PO #:	Sampler's Name:	Project Location:	er:	Project Name:	Phone:	City, State ZIP:	Address:	Company Name:	Project Manager:	💸 eurofins
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#### Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

#### Login Number: 5167 List Number: 1 **Creator: Clifton, Cloe**

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	8
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	9
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	13
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	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

#### Job Number: 890-5167-1

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 890-5167-1

Login Number: 5167	List Source: Eurofins Houston
List Number: 2	List Creation: 08/29/23 02:16 PM
Creator: Baker, Jeremiah	

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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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").	True	

# APPENDIX G

# **ERI** Report

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





# 2D Electrical Resistivity Imaging Report North Brushy PW Line Spill Eddy County, New Mexico

Prepared For: eTech Environmental & Safety Solutions, Inc 13000 West County Road 100 Odessa, TX 79765

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#### ETEC-003-20230626

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#### **1.0 INTRODUCTION**

This report was commissioned by eTech Environmental and Safety Solutions Inc. (hereinafter referred to as "the client"), on June 26, 2023, for the purpose of determining the depth of the water table, as well as determining the existence of any voids, within an area near the North Brushy PW Line Spill (hereinafter termed "NBPW") centered at N 32.054153° W 103.942658° using electrical resistivity imaging.

#### 1.1 Goals of this Study

To provide the client with the depth to the water table or perched aquifers, as well as the location and depth of any voids, within an area near the North Brushy PW Line Spill selected by the client using electrical resistivity imaging for the purpose of determining any impact to the water table.

#### 1.2 Summary of Findings

A possible discontinuous perched aquifer is interpreted to be approximately 13 – 15 meters (43 – 49 feet) beneath the surface based on the resistivity survey. This low resistivity anomaly can also be interpreted as a stratigraphic clay layer. Drilling is required to confirm or refute this interpretation. No anomalies consistent with air- or water-filled voids were found within the NBPW survey. Additionally, the lack of surface karst features does not mean the area isn't karstified and subsurface karst features may exist outside of the areas investigated. Caution should be exercised during any drilling operations. Employing a Bureau of Land Management approved karst monitor on site during drilling operations should be considered. See section **3.0 RESULTS** and **4.0 DISCUSSION** for more information.

#### 1.3 Affected Environment

The NBPW project site is located in evaporite karst terrain, a landform that is characterized by underground drainage through solutionally enlarged conduits. Evaporite karst terrain may contain sinkholes, sinking streams, caves, and springs. Sinkholes leading to underground drainages and voids are common. These karst features, as well as occasional fissures and discontinuities in the bedrock, provide the primary sources for rapid recharge of the groundwater aquifers of the region.

Karst features are delicate resources that are often of geological, hydrological, biological, and archeological importance, and should be protected. The three primary concerns in these types of terrain are environmental issues, worker safety, and infrastructure integrity.



Figure 1: Karst occurrence zone overview. Background image credit: Google Earth. Image date: December 21, 2019. Image datum: WGS-84.

The Bureau of Land Management (BLM) categorizes all areas within the Carlsbad Field Office (CFO) zone of responsibility as having either low, medium, or high cave potential based on geology, occurrence of known caves, density of karst features, and potential impacts to freshwater aquifers<sup>[1]</sup>. The New Mexico State Land office also recognizes these categories. This project occurs within a **MEDIUM** karst occurrence zone<sup>[2]</sup> (MKOZ, **Figure 1**).

A medium karst occurrence zone is defined as an area in known soluble rock types that may have a shallow insoluble overburden. These areas may contain isolated karst features such as caves and sinkholes. Groundwater recharge may not be wholly dependent on karst features, but the karst features still provide the most rapid aquifer recharge in response to surface runoff<sup>[1]</sup>.
## 1.4 Limitations of Report

This report should be read in full. No responsibility is accepted for the use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.

This report has been prepared for the use of eTech Environmental & Safety Solutions, Inc., in accordance with generally accepted consulting practices. Every effort has been made to ensure the information in this report is accurate as of the time of its writing. This report has not been prepared for use by parties other than the client, their contracting party, and their respective consulting advisors. It may not contain sufficient information for the purposes of other parties or for other uses.

This report was prepared upon completion of the associated fieldwork using a standard template prepared by Southwest Geophysical Consulting and is based on information collected prior to fieldwork, conditions encountered on site, and data collected during the fieldwork and reviewed at the time of preparation. Southwest Geophysical Consulting disclaims responsibility for any changes that might have occurred at the site after this time. The interpreted results, locations, and depths noted in this report (if applicable) should be taken as an interpretation only and no decision should be based solely on this information. Physical verification of geophysical results using geotechnical methods should be considered.

To the best of our knowledge, information contained in this report is accurate at the date of issue; however, conditions on the site can change in a limited time and, therefore, the information in this report shall not be used beyond three years past the date of the survey (see section **2.3 Description of Survey**).

# 2.0 LOCATION AND DESCRIPTION OF STUDY AREA

# 2.1 Description of Site

The site is located 48.6 kilometers (30.2 miles) south-southeast of Carlsbad, New Mexico, south of Pipeline Road and north of Whitehorn Road, and within the SW quarter section of section 12 of NM T26S R29E<sup>[3]</sup> (Figure 1 and Figure 2). The region has flat terrain with gypsite soils and small outcrops of sandstone. Karstification can occur within the gypsite soils and underlying gypsum bedrock<sup>[4]</sup>. This area is within the Chihuahuan Desert Thornscrub as defined by the Southwestern Regional ReGAP Vegetation map<sup>[5]</sup> and the vegetation consists mostly of areas of grass, sparse creosote, and sparse yucca. The survey site is located within a BLM-CFO designated MKOZ<sup>[2]</sup> (Figure 1), and is entirely within BLM-CFO managed land<sup>[6]</sup> (Figure 2).



Figure 2: Land ownership<sup>[6]</sup> and PLSS<sup>[3]</sup> overview. Background image credit: Google Earth. Image date: December 21, 2019. Image datum: WGS-84.

## 2.2 Local Geology

The survey site for the NBPW project is located at an elevation of 905 meters (2,969 feet),  $\pm$  2 meters (6.6 feet), within an area underlain by the Permian Dewey Lake (Pdl) and Rustler Formations (Pru). The area is mantled by thin gypsiferous soils and Quaternary alluvium (Qal)<sup>[7]</sup> between 0 and 6 meters in depth (**Figure 3**).

The Dewey Lake Formation is composed of calcite-cemented, hematite-stained quartz sand grains<sup>[8]</sup> and occasional gypsum lenses and can, in favorable conditions, form cavernous porosity within 30 meters of the top of the Rustler<sup>[9]</sup>. The Dewey Lake Formation is also known to be highly fractured near areas of heavy halite dissolution such as Nash Draw (approximately 30 kilometers north), and these fractures can act as hydrologic conduits.



Figure 3: Geology overview. Geology map credit: The Digital Geologic Map of New Mexico in ARC/INFO Format<sup>[10]</sup>. Background image credit: Google Earth. Image date: December 21, 2019. Image datum: WGS-84.

The Rustler Formation is an evaporite facies and is composed mainly of thin siltstones and sandstones interbedded with claystones, dolomite and gypsum<sup>[8]</sup>, and contains both karst-forming strata (the Forty-niner and Tamarisk Members) and two shallow aquifers (the Magenta and Culebra Dolomite Members). The Forty-niner and Tamarisk Members are known to have highly developed karst features, including large voids and solution-enlarged fractures<sup>[8]</sup>.

## 2.3 Description of Survey

For this survey, an Advanced Geosciences Inc. (AGI) SuperSting<sup>™</sup> Wifi R8 with a multielectrode switchbox, a 56-electrode array of 40-centimeter-long electrodes, and a tablet controller were used to image the subsurface. This survey consisted of two resistivity lines in a dipole-dipole strong-gradient configuration laid out south-southeast to north-northwest with 4-meter spacing, resulting in 220-meter-long arrays (**Figure 4**, **Table 1**, and **APPENDIX 7.2**). A preconfigured command file was used to run the data collection (DDSG56). This electrode configuration provided a depth of investigation of 37 to 50 meters (121 to 164 feet) and a near-surface resolution of 2 meters (6.6 feet). A Leica GS18 GPS was used to record electrode locations and elevations. On this survey, the estimated horizontal error mean was 7 centimeters (2.8 inches) and the estimated vertical error mean was 12 cm (4.7 inches).

**APPENDIX 7.2** provides a detailed list of each electrode number, location in latitude/ longitude (decimal degree format), and elevation in meters. EarthImager<sup>M</sup> 2D software was used to download and process the data and to provide the model used to make our interpretations (**Table 2**). A typical starting model was used for the data processing due to the two-layer model of the geology in the area; specifically, generally high-resistivity gypsum and dolomite at the surface and low-resistivity saturated gypsum and dolomite bedrock at depth. The starting model used was "Average Apparent Resistivity." A default inversion setting of "Conductive Earth" was used due to the low resistivity values in the area as a result of the presence of saline groundwater. The inversion had a minimum apparent resistivity set to 0.1 Ohm-meters (Ohm-m or  $\Omega$ -m) and a max apparent resistivity set to 100,000  $\Omega$ -m (**Table 2**).

All field work, including setup, stow, and travel, was completed by Garrett Jorgensen Olague and Roman Velasquez on September 25, 2023.



Figure 4: Survey overview. Two survey lines (denoted with white numbers) were conducted with 56 electrodes each at 4meter spacing (yellow dots denoted with blue numbers). Background image credit: Google Earth. Image date: December 21, 2019. Image datum: WGS-84.

#### **3.0 RESULTS**

Electrical resistivity tomography forms images of the subsurface by causing a current to flow through the rock and soil and then measuring the resistance of these materials as the current flows through them. This measurement is taken many times and the resulting data, once processed, is used to produce a model of the subsurface (**Figure 5**). This model is produced using "non-unique" solutions, which means that there are many models and interpretations which will satisfy the data. Using experience and knowledge of the local geology, a high-confidence model can be established and used to develop an accurate understanding of what lies below the surface. This survey was conducted with the express purpose of locating subsurface voids and does not purport to find paleokarst (old, non-active karst features that have been filled in with sand and sediment) or nascent karst features below the resolution limit of the survey.

The results of this study indicate a three-layered geologic system with resistivities between 1.5 and 400 Ohm-m (**Figure 5**). Line NBPW01 transitions from approximately 400 Ohm-m to less than 3 Ohm-m at approximately 13 meters (43 feet) beneath the surface, then back up to approximately 50 Ohm-m at a depth of 24 meters (81 feet). Line NBPW02 transitions from approximately 60 Ohm-m to less than 3 Ohm-m at approximately 15 meters (49 feet) beneath the surface and then returns to approximately 50 Ohm-m at a depth.



Figure 5: 2D inverted resistivity section. Reds and oranges indicate higher resistivity values. Yellows and greens are medium resistivity values. Blues are low resistivity values. Red dashed line is interpreted as the water table. Vertical purple lines are the boreholes superimposed to the closet location within the resistivity section.

#### **4.0 DISCUSSION**

The NBPW survey area has a horizontal, low-resistivity anomaly that is interpreted as a discontinuous perched aquifer between 13 - 30 meters (43 to 104 feet) beneath the surface (**Figure 6**). Resistivities within these boundaries drop to 1.5 - 15 Ohm-m, which is consistent with either a saturated medium (aquifer) or layers of either clays or moist to saturated halite. Higher resistivity values (between 35 and 600 Ohm-m) are interpreted as dry to slightly moist gypsum and clay-rich sandstone bedrock.



Figure 6: Interpretation. Colored trapezoids are 2D inverted resistivity lines. Green polygon is the area of interest. Blue and green placemarks are borehole locations. Background image credit: Google Earth. Image date: December 21, 2019. Image datum: WGS-84.

The lowest resistivity zone (1.5 Ohm-m) within the survey is directly beneath the downstream portion of the release footprint. This indicates the possibility that the fluids from the release made their way into the subsurface at this location. Borehole BH12 is the closest geotechnical investigation to this location; however, it does not reach deep enough to confirm or refute this interpretation (**Figure 5**). BH12 was drilled to a depth of 8 meters (26) feet, 5 meters (16 feet) shy of the top of this anomaly.

No high-resistivity anomalies consistent with voids or other karst features were interpreted within the two resistivity lines.

Please note that the project site is within karst terrain, and small air- or sediment-filled voids and/or brecciated zones and solutionally enlarged fractures that are below the resolution limit of the survey (1.5 - 2.0 meters) may exist; these may be encountered during remediation, and if so, should be evaluated by a karst specialist prior to continued work. Employing a BLM-CFO approved karst monitor on site during activities in this area should be considered.

#### **5.0 RECOMMENDATIONS**

#### 5.1 Summary

- The water table underneath the project area is interpreted to start at a depth of 13 15 meters (43 to 49 feet) and is considered to be a discontinuous perched aquifer.
- Drilling is required to confirm or refute this interpretation.
- There is a possibility of encountering small voids during drilling and remediation due to the nature of the voids and fractures in this area.
- When drilling or conducting any remediation activities in this area, employing a BLM-CFO approved karst monitor on site should be considered.

## 5.2 Best Practices

This area is prone to rapid karst formation and warrants careful planning and engineering to mitigate karst-forming processes that could be accelerated by poor planning and considerations. Proper practices following karst guidelines should be implemented during all phases of remediation.

Mitigation measures for any karst features revealed during excavation or drilling shall be approved by the Bureau of Land Management – Carlsbad Field Office and follow the Natural Resources Conservation Service Conservation Practice Standard for Karst Sinkhole Treatment, Code 527, or the Bureau of Land Management Cave and Karst Management Handbook, H-8380-1.

Vigilance during remediation is paramount. If voids are encountered during excavation, contact the Bureau of Land Management Karst Division at (575) 234-5972, the New Mexico State Land Office Surface Resources Division at (505) 827-5768, or a BLM-CFO-approved karst contractor and request an on-site investigation from a karst expert if one is not already on site. A karst consultant can generally be available in Eddy County within five hours.

Approved karst monitors should have karst feature identification training, at least two years of supervised experience identifying karst features, wilderness first aid training, SRT training, confined space training, gas monitor training, and a minimum of SPAR cave rescue training through NCRC. They should have with them the proper gear and be prepared both physically and mentally to enter a collapse feature within minutes to perform a rescue if needed. Monitoring services with qualified karst monitors, as well as cave surveys and geophysical surveys, are available from Southwest Geophysical Consulting.

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Under no circumstances should an untrained, inexperienced person enter a cave, pit, sinkhole, or collapse feature. All field employees of Southwest Geophysical Consulting have extensive caving experience and the ability to determine whether entry into a karst feature is safe or presents a hazard. In the event it is necessary to enter a karst feature, Southwest Geophysical Consulting can provide these services on request.

Cave and karst resource inventory reports, karst feature investigations, and geophysical reports commissioned at the request of the land manager should be submitted to:

#### BLM-CFO: blm nm karst@blm.gov

Cave and karst resource inventory reports for the NMSLO should be submitted to the respective project manager.

#### **6.0 REFERENCES**

- 1 Goodbar, J. R. Vol. BLM Management Handbook H-8380-1 (ed Carlsbad Field Office) 59 (Bureau of Land Management, Denver, CO, 2015).
- 2 Rybacki, K. (Bureau of Land Management Carlsbad Field Office, 2020).
- 3 Earthpoint. Earthpoint Tools for Google Earth, <<u>https://www.earthpoint.us/Townships.aspx</u>> (2022).
- 4 Decker, D. D., Goodbar, J. R., Jorgensen, G. L. & Brent, E. L. Karst Hazards in the Burton Flats, Southeast New Mexico. *Unpublished* (2022).
- 5 Whitehead, W. & Flynn, C. *Plant Utilization in Southeastern New Mexico: Botany, Ethnobotany, and Archaeology*. (Bureau of Land Management, Carlsbad Field Office, 2017).
- 6 NMSLO. Digital overlay (KML) of the surface land ownership in New Mexico (New Mexico State Land Office, Santa Fe, NM, 2016).
- 7 Scholle, P. A. Geologic Map of New Mexico. (2003).
- 8 Austin, G. S. *Geology and mineral deposits of Ochoan rocks in Delaware Basin and adjacent areas*. Vol. Circular 159 (New Mexico Bureau of Mines and Mineral Resources, 1978).
- Powers, D. W., Lambert, S. J., Shaffer, S.-E., Hill, L. R. & Weart, W. D. Geological Characterization Report, Waste Isolation Pilot Plant (WIPP) Site, Southeastern New Mexico. 726 (Sandia Laboratories, Albuquerque, NM, 1978).
- 10 Green, G. N. & Jones, G. E. *The Digital Geologic Map of New Mexico in ARC/INFO Format*, <<u>https://mrdata.usgs.gov/geology/state/state.php?state=NM</u>> (1997).

# 7.0 APPENDICES

# 7.1 Glossary of Terms

ACEC	Area of Critical Environmental Concern	
AGI	Advanced Geosciences Inc.	
BLM-CFO	Bureau of Land Management - Carlsbad Field Office	
brecciated	Fractured rock caused by faulting or collapse.	
caprock-collapse sinkhole	Collapse of roof-spanning rock into a cave or void.	
cave	Natural opening at the surface large enough for a person to enter.	
cover-collapse sinkhole	Collapse of roof-spanning soil or clay ground cover into a subsurface void.	
ERI	Electrical Resistivity Imaging	
GPS	Global Positioning System	
grike	A solutionally enlarged, vertical, or sub-vertical joint or fracture.	
(H)	High confidence modifier for a PKF. This is typically reserved for a	
	feature that is definitely karst but has not been confirmed in the field.	
НКОΖ	High Karst Occurrence Zone	
InSAR	Interferometric Synthetic Aperture Radar. A method by which radar	
	signals from satellites are processed to determine the amount and rate of	
	subsidence of an area as well as whether the area is actively subsiding.	
karst	A landscape containing solutional features such as caves, sinkholes,	
	swallets, and springs.	
(L)	Low confidence modifier for a PKF. This is typically a feature that	
	cannot be ruled out as karst but is most likely NOT karst related.	
	This modifier may also be used for pseudokarst features.	
LED	Locally enclosed depression. A natural depression on the surface that	
	collects rainwater. Some contain swallets and/or caves, others do not.	
(M)	Medium confidence modifier for PKF. This is an ambiguous feature	
	that can't be positively identified as karst without a field visit (e.g.,	
	burrows, abandoned unlined wells, solution tubes, pseudokarst).	
МКОΖ	Medium Karst Occurrence Zone	
NCRC	National Cave Rescue Commission	
NKF	Non-karst feature. Used for features originally identified as PKF that	
	have been subsequently identified in the field as non-karst related.	
	This term may also be used for pseudokarst features.	
NMSLO	New Mexico State Land Office	
Ohm-m	Ohm-meter, a unit of measurement for resistivity. Sometimes	
	abbreviated $\Omega$ -m.	

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paleokarst	Previously formed karst features that have been filled in by erosion	
	and/or deposition of minerals.	
Pat	Permian Artesia Group	
Рс	Permian Capitan Formation	
Pcs	Permian Castile Formation	
Pdl	Permian Dewey Lake Formation	
PKF	Possible karst feature. This term is reserved for features identified	
	in satellite or aerial imagery that have NOT been visited in the	
	field. Further modifiers include (H) for high confidence, (M) for	
	medium confidence, and (L) for low confidence. These confidence	
	levels are based on field experience.	
PLSS	Public Land Survey System	
Pqg	Permian Queen/Greyburg Formation	
Pru	Permian Rustler Formation	
pseudokarst	Karst-like features (sinkholes, conduits, voids etc.) that are not	
	formed by dissolution. These types of features include soil piping,	
	lava tubes, and some cover-collapse and suffosion sinkholes.	
Psl	Permian Salado Formation	
Psr	Permian Seven Rivers Formation	
Pt	Permian Tansill Formation	
Ру	Permian Yates Formation	
Qal	Quaternary alluvium	
Qp	Quaternary piedmont deposits	
Qpl	Quaternary playa lake deposits	
RKF	Recognized karst feature. This term is reserved for karst features	
	that have been physically verified in the field.	
SKF	Surface Karst Feature	
SPAR	Small Party Assisted Rescue	
suffosion sinkhole	Raveling of soil into a pre-existing void or fracture.	
swallet	A natural opening in the surface, too small for a person, that drains	
	water to an aquifer. Some are "open," meaning a void can be seen	
	below; some are "closed, "meaning they are full of sediment.	
SWG	Southwest Geophysical Consulting, LLC	
UTM	Universal Transverse Mercator (projected coordinates)	
(V)	Field verified modifier for a PKF. This indicates that the feature has been	
	visited by a qualified karst professional in the field and fully identified	
WGS	World Geodetic System (geographic coordinates)	

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#### 7.2 Electrode Data

Please see accompanying data files in NBPW\_Electrode\_Points.xlsx and NBPW\_Electrode\_ Points.kmz within file ETEC-003-20230626\_NBPW\_Data\_Files.kmz for detailed information on each electrode location.

 Table 1: Survey Line Data Table. The .kmz file contains all the points for the survey line listed in the file name. These data are available in the accompanying files NBPW \_Electrode\_Points.xlsx and ETEC-003-20230626\_NBPW\_Data\_Files.kmz.

File Name:	Completed By:	Date:
NBPW01.kmz		
	Garrett Jorgensen – Senior Field Geologist	09/25/2023
NBPW02.kmz	Roman Velasquez – Field Technician	

Raw data files (.stg files for EarthImager<sup>™</sup> 2D) and processed data (.trn files, terrain files for surface correction in EarthImager<sup>™</sup> 2D and .out files, the processed .stg files) are available upon request.

#### Table 2: Software Information and Settings

Software Name:	EarthImager <sup>™</sup> 2D
Version:	2.4.4.649
Starting Model:	Average Apparent Resistivity
Default Inversion Settings:	Surface
Changes to Default Inversion Settings:	Max Apparent Resistivity = 100 kΩ-m
	Min Apparent Resistivity = $0.1 \Omega$ -m

## **8.0 ATTESTATION**

## David D. Decker, PhD, PG, CPG

Chief Executive Officer, Principal Geologist Southwest Geophysical Consulting, LLC 5117 Fairfax Dr. NW Albuquerque, NM 87114 <u>dave@swgeophys.com</u> (505) 585-2550

## **CERTIFICATE OF AUTHOR**

I, David D. Decker, a Licensed Professional Geologist and a Certified Professional Geologist, do certify that:

- I am currently employed as a consulting geologist in the specialty of caves and karst with an office address of 5117 Fairfax Dr. NW, Albuquerque, NM, USA, 87114.
- I graduated with a Master of Science in Applied Physics with a specialization in Sensor Systems from the Naval Post Graduate School in Monterey, California, in 2003, and a Doctor of Philosophy in Earth and Planetary Sciences from the University of New Mexico, Albuquerque, New Mexico, in 2018.
- I am a Licensed Professional Geologist in the State of Texas, USA (PG-15242) and have been since 2021. I am a Certified Professional Geologist through the American Institute of Professional Geologists (CPG-12123) and have been since 2021.
- I have been employed as a geologist continuously since 2016. I was previously employed as a Fire Controlman, Naval Flight Officer, and Aerospace Engineering Duty Officer in the U.S. Navy and operated, maintained, and installed various sensor systems including magnetic, electromagnetic, radar, communications, and acoustic systems in various capacities from 1986 through 2010.
- I have been involved in various aspects of cave and karst studies continuously since 1985, including exploration, mapping, and scientific studies.
- I have read the definition of "qualified karst professional" set out in the ASTM Standard (currently in review). I meet the definition of "qualified professional" for the purposes of ASTM E-1527.
- I am responsible for the content, compilation, and editing of all sections of report number ETEC-003-20230626 entitled, "2D Electrical Resistivity Imaging Report, North Brushy PW Line Spill, Eddy County, New Mexico." I or a duly authorized and qualified representative of Southwest Geophysical Consulting, LLC, have personally visited this site on the date or dates mentioned in section 2.3 Description of Survey.

• I have no prior involvement nor monetary interest in the described property or project, save for my fee for conducting this investigation and providing the report.

Dated in Albuquerque, New Mexico, October 27, 2023.



David D. Decker PhD, CPG-12123



# **APPENDIX H**

# **Email Notifications**

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



From:	Enviro, OCD, EMNRD <ocd.enviro@emnrd.nm.gov></ocd.enviro@emnrd.nm.gov>	
Sent:	Thursday, January 19, 2023 10:13 AM	
То:	Erick Herrera	
Cc:	Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD	
Subject:	RE: [EXTERNAL] WPX Site Sampling Activity Update (1/23 - 1/27)	

## [ \*\*EXTERNAL EMAIL\*\*]

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 <eherrera@ensolum.com>
Sent: Thursday, January 19, 2023 8:49 AM
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 (1/23 - 1/27)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Morning,

WPX anticipates conducting confirmation soil sampling activities at the following sites between January 23 – January 27, 2023:

Site Name: North Brushy PW Line Incident Number: nAPP2231126594

Thank you,

From:	Joseph Hernandez
Sent:	Wednesday, February 1, 2023 8:14 PM
То:	ocd.enviro@state.nm.us
Cc:	'CFO_Spill, BLM_NM'; Devon Team; Raley, Jim
Subject:	WPX Site Sampling Activity Update (2/6 - 2/10)

All,

WPX anticipates conducting confirmation soil sampling activities at the following sites between February 6 – February 10, 2023:

Site Name: North Brushy PW Line Incident Number: nAPP2231126594

Site Name: RDX 16-4 API: 30-015-39750 Incident Number: nAPP2223636403

Thank you,



Joseph S. Hernandez Senior Geologist 281-702-2329 Ensolum, LLC

From:	Wells, Shelly, EMNRD <shelly.wells@emnrd.nm.gov></shelly.wells@emnrd.nm.gov>	
Sent:	Wednesday, July 19, 2023 4:55 PM	
То:	Erick Herrera	
Cc:	Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD	
Subject:	RE: [EXTERNAL] WPX Site Sampling Activity Updates (7/24-7/28)	

Good afternoon Erick,

The OCD has received your notification. 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.

Thank you,

Shelly

Shelly Wells \* Environmental Specialist-Advanced Administrative Permitting Program EMNRD-Oil Conservation Division 1220 S. St. Francis Drive|Santa Fe, NM 87505 (505)469-7520<u>|Shelly.Wells@emnrd.nm.gov</u> http://www.emnrd.state.nm.us/OCD/

From: Erick Herrera <erick@etechenv.com>
Sent: Wednesday, July 19, 2023 3:36 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; blm\_nm\_cfo\_spill@blm.gov
Cc: Raley, Jim <jim.raley@dvn.com>; Devon-Team <Devon-Team@etechenv.com>
Subject: [EXTERNAL] WPX Site Sampling Activity Updates (7/24-7/28)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between July 24 through July 28, 2023:

Proposed Date: July 24, 2023, July 25, 2023, July 26, 2023, July 27, 2023, July 28, 2023, Proposed Timeframe: 0800 – 1700 hrs. Site Name: RDX 9-4 Incident Number: nAB1803254347 API: 30-015-40180

Proposed Dates: July 24, 2023, July 25, 2023, July 26, 2023, July 27, 2023, July 28, 2023, Proposed Timeframe: 0800 – 1700 hrs. Site Name: North Brushy PW Line Incident Numbers: nAPP2231126594 & nAPP2312845934

.

Thank you,

**Erick Herrera** Staff Geologist

e Environmental & Safety Solutions, Inc.

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

From:	Raley, Jim <jim.raley@dvn.com></jim.raley@dvn.com>
Sent:	Thursday, July 6, 2023 1:34 PM
То:	Hamlet, Robert, EMNRD
Cc:	Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD; Devon-
	Team
Subject:	RE: [EXTERNAL] (Final Extension) - WPX - North Brushy Pipeline - NAPP2231126594, nAPP2312845934

Robert,

On April 13<sup>th</sup>, 2023 you granted a final extension of July 22, 2023 for incident# NAPP2231126594. However on May 5<sup>th</sup>, 2023 we had an additional release nAPP2312845934 that basically covered much of the same footprint of the previous spill.

With this new release we had to reevaluate some of our previous data, and are in the process of scheduling a rig to collect the additional information needed to submit a workplan.

With these complications in mind, WPX Energy respectfully asks for a 90 day extension for both incidents (nAPP2231126594, nAPP2312845934) to October 20<sup>th</sup>, 2023. We plan on addressing both releases in the same workplan.

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



From: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Sent: Thursday, April 13, 2023 9:20 AM
To: Raley, Jim <Jim.Raley@dvn.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD
<Jennifer.Nobui@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
Subject: [EXTERNAL] (Final Extension) - WPX - North Brushy Pipeline - NAPP2231126594

RE: Incident #NAPP2231126594

Jim,

Your request for an extension to **July 22nd, 2023** is approved. This will be the **final extension** for this release. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 506 W. Texas Ave.| Artesia, NM 88210 575.909.0302 | robert.hamlet@state.nm.us http://www.emnrd.state.nm.us/OCD/



From: Raley, Jim <<u>Jim.Raley@dvn.com</u>>
Sent: Thursday, April 13, 2023 9:02 AM
To: Hamlet, Robert, EMNRD <<u>Robert.Hamlet@emnrd.nm.gov</u>>
Cc: Bratcher, Michael, EMNRD <<u>mike.bratcher@emnrd.nm.gov</u>>; Nobui, Jennifer, EMNRD
<<u>Jennifer.Nobui@emnrd.nm.gov</u>>; Harimon, Jocelyn, EMNRD <<u>Jocelyn.Harimon@emnrd.nm.gov</u>>
Subject: RE: [EXTERNAL] (Extension Approval) North Brushy Pipeline nAPP2231126594

Robert,

WPX Energy is requesting a 90 day extension on incident nAPP2231126594 to July 22<sup>nd</sup>, 2023. From our original correspondence we had requested an extension, due to the difficulties we had getting into the site. It required special ROW permitting from BLM and construction of a road. We have currently drilled two rounds of delineation boreholes and need additional time to delineate the site for submission of a remediation plan. The spill area lays above several large transmission lines and requires special care, which has slowed the delineation process considerably.

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



From: Hamlet, Robert, EMNRD <<u>Robert.Hamlet@emnrd.nm.gov</u>>

Sent: Tuesday, January 17, 2023 9:14 AM

To: Raley, Jim <<u>Jim.Raley@dvn.com</u>>

**Cc:** Devon-Team < <u>Devon-Team@ensolum.com</u>>; Bratcher, Michael, EMNRD < <u>mike.bratcher@emnrd.nm.gov</u>>; Nobui, Jennifer, EMNRD < <u>Jennifer.Nobui@emnrd.nm.gov</u>>; Harimon, Jocelyn, EMNRD < <u>Jocelyn.Harimon@emnrd.nm.gov</u>>; **Subject:** [EXTERNAL] (Extension Approval) North Brushy Pipeline nAPP2231126594

RE: Incident #NAPP2231126594

Jim,

Your request for an extension to **April 23rd, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 506 W. Texas Ave.| Artesia, NM 88210 575.909.0302 | robert.hamlet@state.nm.us http://www.emnrd.state.nm.us/OCD/



From: Enviro, OCD, EMNRD <<u>OCD.Enviro@emnrd.nm.gov</u>>
Sent: Tuesday, January 17, 2023 8:25 AM
To: Hamlet, Robert, EMNRD <<u>Robert.Hamlet@emnrd.nm.gov</u>>
Subject: FW: [EXTERNAL] Extension Request North Brushy Pipeline nAPP2231126594

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: Raley, Jim <<u>Jim.Raley@dvn.com</u>>
Sent: Tuesday, January 17, 2023 8:05 AM
To: Enviro, OCD, EMNRD <<u>OCD.Enviro@emnrd.nm.gov</u>>
Cc: Devon-Team <<u>Devon-Team@ensolum.com</u>>
Subject: [EXTERNAL] Extension Request North Brushy Pipeline nAPP2231126594

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

#### All,

We had a spill on 10/25/2022 along a pipeline ROW, it was assigned incident nAPP2231126594. The release was in a remote area of BLM land and access to the spill area required applying for a BLM ROW permit. We were granted the permit to improve a road on 1/9/2023 and are in the process of gaining access to the spill area.

Due to this delay we request a 90 day extension to 4/23/2023.

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



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From: Sent:	Hamlet, Robert, EMNRD <robert.hamlet@emnrd.nm.gov> Thursday, July 6, 2023 2:41 PM</robert.hamlet@emnrd.nm.gov>
То:	Raley, Jim
Cc:	Devon-Team; Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD
Subject:	(Final Extension) - WPX - North Brushy Pipeline - NAPP2231126594, NAPP2312845934

Some people who received this message don't often get email from robert.hamlet@emnrd.nm.gov. Learn why this is important

RE: Incident #NAPP2231126594, NAPP2312845934

#### Jim,

Your request for an extension to **October 20th, 2023** is approved. This will be the **final extension** for this release. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 506 W. Texas Ave.| Artesia, NM 88210 575.909.0302 | robert.hamlet@state.nm.us http://www.emnrd.state.nm.us/OCD/



From: Raley, Jim <Jim.Raley@dvn.com>
Sent: Thursday, July 6, 2023 12:34 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD
<Jennifer.Nobui@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Devon-Team
<Devon-Team@etechenv.com>
Subject: RE: [EXTERNAL] (Final Extension) - WPX - North Brushy Pipeline - NAPP2231126594, nAPP2312845934

Robert,

On April 13<sup>th</sup>, 2023 you granted a final extension of July 22, 2023 for incident# NAPP2231126594. However on May 5<sup>th</sup>, 2023 we had an additional release nAPP2312845934 that basically covered much of the same footprint of the previous spill.

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With these complications in mind, WPX Energy respectfully asks for a 90 day extension for both incidents (nAPP2231126594, nAPP2312845934) to October 20<sup>th</sup>, 2023. We plan on addressing both releases in the same workplan.

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



From: Hamlet, Robert, EMNRD <<u>Robert.Hamlet@emnrd.nm.gov</u>>
Sent: Thursday, April 13, 2023 9:20 AM
To: Raley, Jim <<u>Jim.Raley@dvn.com</u>>
Cc: Bratcher, Michael, EMNRD <<u>mike.bratcher@emnrd.nm.gov</u>>; Nobui, Jennifer, EMNRD
<<u>Jennifer.Nobui@emnrd.nm.gov</u>>; Harimon, Jocelyn, EMNRD <<u>Jocelyn.Harimon@emnrd.nm.gov</u>>
Subject: [EXTERNAL] (Final Extension) - WPX - North Brushy Pipeline - NAPP2231126594

#### RE: Incident #NAPP2231126594

Jim,

Your request for an extension to **July 22nd, 2023** is approved. This will be the **final extension** for this release. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 506 W. Texas Ave.| Artesia, NM 88210 575.909.0302 | robert.hamlet@state.nm.us http://www.emnrd.state.nm.us/OCD/



From: Raley, Jim <<u>Jim.Raley@dvn.com</u>>
Sent: Thursday, April 13, 2023 9:02 AM
To: Hamlet, Robert, EMNRD <<u>Robert.Hamlet@emnrd.nm.gov</u>>
Cc: Bratcher, Michael, EMNRD <<u>mike.bratcher@emnrd.nm.gov</u>>; Nobui, Jennifer, EMNRD
<<u>Jennifer.Nobui@emnrd.nm.gov</u>>; Harimon, Jocelyn, EMNRD <<u>Jocelyn.Harimon@emnrd.nm.gov</u>>
Subject: RE: [EXTERNAL] (Extension Approval) North Brushy Pipeline nAPP2231126594

Robert,

WPX Energy is requesting a 90 day extension on incident nAPP2231126594 to July 22<sup>nd</sup>, 2023. From our original correspondence we had requested an extension, due to the difficulties we had getting into the site. It required special ROW permitting from BLM and construction of a road. We have currently drilled two rounds of delineation boreholes and need additional time to delineate the site for submission of a remediation plan. The spill area lays above several large transmission lines and requires special care, which has slowed the delineation process considerably.

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



From: Hamlet, Robert, EMNRD <<u>Robert.Hamlet@emnrd.nm.gov</u>>
Sent: Tuesday, January 17, 2023 9:14 AM
To: Raley, Jim <<u>Jim.Raley@dvn.com</u>>
Cc: Devon-Team <<u>Devon-Team@ensolum.com</u>>; Bratcher, Michael, EMNRD <<u>mike.bratcher@emnrd.nm.gov</u>>; Nobui,
Jennifer, EMNRD <<u>Jennifer.Nobui@emnrd.nm.gov</u>>; Harimon, Jocelyn, EMNRD <<u>Jocelyn.Harimon@emnrd.nm.gov</u>>; Subject: [EXTERNAL] (Extension Approval) North Brushy Pipeline nAPP2231126594

RE: Incident #NAPP2231126594

Jim,

Your request for an extension to **April 23rd, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 506 W. Texas Ave.| Artesia, NM 88210 575.909.0302 | robert.hamlet@state.nm.us http://www.emnrd.state.nm.us/OCD/



From: Enviro, OCD, EMNRD <<u>OCD.Enviro@emnrd.nm.gov</u>>
Sent: Tuesday, January 17, 2023 8:25 AM
To: Hamlet, Robert, EMNRD <<u>Robert.Hamlet@emnrd.nm.gov</u>>
Subject: FW: [EXTERNAL] Extension Request North Brushy Pipeline nAPP2231126594

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: Raley, Jim <<u>Jim.Raley@dvn.com</u>> Sent: Tuesday, January 17, 2023 8:05 AM To: Enviro, OCD, EMNRD <<u>OCD.Enviro@emnrd.nm.gov</u>> Cc: Devon-Team <<u>Devon-Team@ensolum.com</u>> Subject: [EXTERNAL] Extension Request North Brushy Pipeline nAPP2231126594

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All,

We had a spill on 10/25/2022 along a pipeline ROW, it was assigned incident nAPP2231126594. The release was in a remote area of BLM land and access to the spill area required applying for a BLM ROW permit. We were granted the permit to improve a road on 1/9/2023 and are in the process of gaining access to the spill area.

Due to this delay we request a 90 day extension to 4/23/2023.

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



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General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

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

Page 534 of 540

QUESTIONS

Action 333454

QUESTIONS	
Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	333454
	Action Type:
	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

#### QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2312845934
Incident Name	NAPP2312845934 NORTH BRUSHY PW LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received

#### Location of Release Source

Please answer all the questions in this group.	
Site Name	NORTH BRUSHY PW LINE
Date Release Discovered	05/03/2023
Surface Owner	Federal

#### Incident Details

Please answer all the questions in this group.		
Incident Type	Produced Water Release	
Did this release result in a fire or is the result of a fire	No	
Did this release result in any injuries	No	
Has this release reached or does it have a reasonable probability of reaching a watercourse	No	
Has this release endangered or does it have a reasonable probability of endangering public health	No	
Has this release substantially damaged or will it substantially damage property or the environment	No	
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No	

#### Nature and Volume of Release

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Pipeline (Any)   Produced Water   Released: 4,200 BBL   Recovered: 0 BBL   Lost: 4,200 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS, Page 2

Action 333454

QUESTIONS (continued)		
Operator:	OGRID:	
WPX Energy Permian, LLC	246289	
Devon Energy - Regulatory	Action Number:	
Oklahoma City, OK 73102	333454	
	Action Type:	
	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS

Nature and Volume of Release (continued)		
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.	
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes	
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.	
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.		

Initial Response		
The responsible party must undertake the following actions immediately unless they could create a s	afety hazard that would result in injury.	
The source of the release has been stopped	True	
The impacted area has been secured to protect human health and the environment	True	
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True	
All free liquids and recoverable materials have been removed and managed appropriately	True	
	Not answered. In a second	
actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.		
Subsection A of 19.15.29.11 NMAC), please prepare and attach an information needed for closure evaluation in the follow-up C-141 submission.		
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.		
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 04/15/2024	

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS, Page 3

Action 333454

Page 536 of 540

QUESTIONS (continued)	
	OGRID:
	246280

WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	333454
	Action Type:
	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

#### QUESTIONS

Operator:

Site Characterization

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)	
What method was used to determine the depth to ground water	U.S. Geological Survey	
Did this release impact groundwater or surface water	No	
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:		
A continuously flowing watercourse or any other significant watercourse	Between 100 and 200 (ft.)	
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)	
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)	
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)	
Any other fresh water well or spring	Between ½ and 1 (mi.)	
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)	
A wetland	Between 1 and 100 (ft.)	
A subsurface mine	Greater than 5 (mi.)	
An (non-karst) unstable area	Between 1 and 5 (mi.)	
Categorize the risk of this well / site being in a karst geology	Medium	
A 100-year floodplain	Zero feet, overlying, or within area	
Did the release impact areas not on an exploration, development, production, or storage site	Yes	

#### Remediation Plan

Please answer all the questions ti	hat apply or are indicated. This information must be provided to	the appropriate district office no later than 90 days after the release discovery date.
Requesting a remediation	plan approval with this submission	Yes
Attach a comprehensive report de	monstrating the lateral and vertical extents of soil contaminatio	n associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.
Have the lateral and vertica	al extents of contamination been fully delineated	Yes
Was this release entirely c	ontained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)		
Chloride	(EPA 300.0 or SM4500 CI B)	13100
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	577
GRO+DRO	(EPA SW-846 Method 8015M)	577
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0
	NMAC unless the site characterization report includes complete nelines for beginning and completing the remediation.	d efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC,
On what estimated date with	ill the remediation commence	07/28/2023
On what date will (or did) t	he final sampling or liner inspection occur	07/28/2023
On what date will (or was)	the remediation complete(d)	07/28/2023
What is the estimated surfa	ace area (in square feet) that will be reclaimed	21373
What is the estimated volu	me (in cubic yards) that will be reclaimed	3958
What is the estimated surfa	ace area (in square feet) that will be remediated	21373
What is the estimated volu	me (in cubic yards) that will be remediated	3958
These estimated dates and measu	rements are recognized to be the best guess or calculation at th	ne time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTI	ONS (continued)	
Operator: WPX Energy Permian, LLC	OGRID:246289	
Devon Energy - Regulatory Oklahoma City, OK 73102	Action Number: 333454	
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	
QUESTIONS		
Remediation Plan (continued)		
Please answer all the questions that apply or are indicated. This information must be provided to the	e appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate	e / reduce contaminants:	
(Select all answers below that apply.)		
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes	
Which OCD approved facility will be used for off-site disposal	Not answered.	
OR which OCD approved well (API) will be used for off-site disposal	Not answered.	
OR is the off-site disposal site, to be used, out-of-state	Yes	
In which state is the disposal taking place	Texas	
What is the name of the out-of-state facility	Texas	
OR is the off-site disposal site, to be used, an NMED facility	Not answered.	
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.	
(In Situ) Soil Vapor Extraction	Not answered.	
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.	
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.	
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.	
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.	
OTHER (Non-listed remedial process)	Not answered.	
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed ef which includes the anticipated timelines for beginning and completing the remediation.	frorts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC	
to report and/or file certain release notifications and perform corrective actions for releat the OCD does not relieve the operator of liability should their operations have failed to a	knowledge and understand that pursuant to OCD rules and regulations all operators are required ases which may endanger public health or the environment. The acceptance of a C-141 report by adequately investigate and remediate contamination that pose a threat to groundwater, surface t does not relieve the operator of responsibility for compliance with any other federal, state, or	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 04/15/2024	

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

QUESTIONS, Page 4

Action 333454

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

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QUESTIONS, Page 5

Action 333454

QUESTIONS (continued)		
Operator: WPX Energy Permian, LLC	OGRID: 246289	
Devon Energy - Regulatory Oklahoma City, OK 73102	Action Number: 333454	
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

## QUESTIONS

Deferral Requests Only				
only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.				
Requesting a deferral of the remediation closure due date with the approval of this submission	Νο			

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

QUE	STIONS (continued)
Operator: WPX Energy Permian, LLC	OGRID: 246289
Devon Energy - Regulatory Oklahoma City, OK 73102	Action Number: 333454
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)
QUESTIONS	
Sampling Event Information	
Last sampling notification (C-141N) recorded	{Unavailable.}
Remediation Closure Request	

ly answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.				
Requesting a remediation closure approval with this submission	No			

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QUESTIONS, Page 6

Action 333454

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

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CONDITIONS

Action 333454

CONDITIONS				
Operator:	OGRID:			
WPX Energy Permian, LLC	246289			
Devon Energy - Regulatory	Action Number:			
Oklahoma City, OK 73102	333454			
	Action Type:			
	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)			

Created By	Condition	Condition Date
michael.buchanan	North Brushy PW Line Remediation Plan is approved to include the following conditions of approval: The excavation will be required to the maximum extent practicable within the pipeline right-of-way for both releases. Once WPX believes it has excavated to the maximum extent practicable, please contact the OCD before moving forward. In the event that a pipeline operator does not allow excavation near and around any pipeline to allow the excavation to take place, the OCD requests a letter from the operator indicating they will accept responsibility and liability for remediation. At this time, the variance request to leave chloride contamination in place between 5' to 38' is not approved. The request to collect sidewall confirmation samples representative of 1000 square feet and no confirmation floor samples is not approved. Based on submitted ground-water lab analyses provided, the OCD has reasonable evidence to believe that groundwater in the areas of concern has been impacted.	2/17/2025